THE BUILDER

· a · Journal · for · the ·

ARCHITECT & CONSTRUCTOR

VOL. CLVIII FEBRUARY 9 1940 No. 5062

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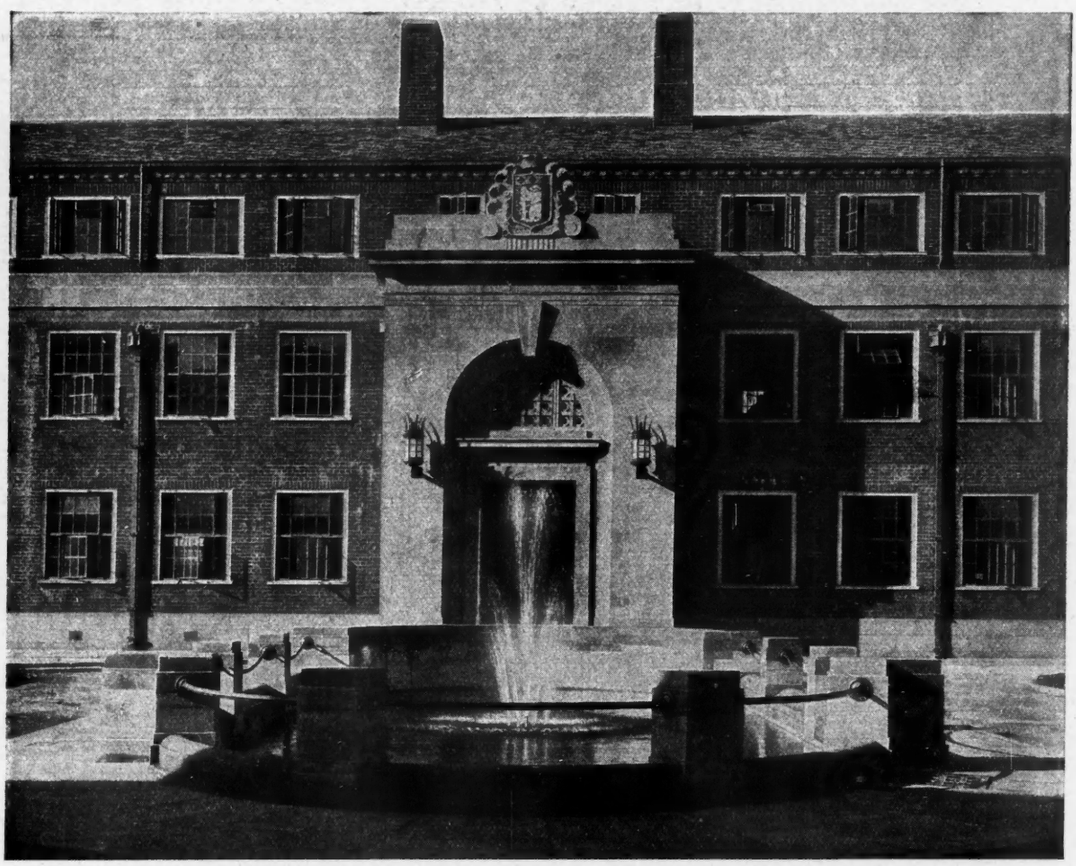

Architect: A. C. Bunch, F.R.I.B.A, County Architect. *Contractor*: Edgar Crowder

WATER STORAGE RESERVOIR FOR FIRE FIGHTING.

IT was necessary to provide a reservoir to supply water in case of a lack of pressure in the fire hydrant mains, and it was a happy thought to make an architectural feature of the pool that serves this purpose. The importance of making sure that there should be no failure of this auxiliary supply needs no emphasis, and it is a tribute to the proved efficacy of 'PUDLO' Brand cement waterproofer that it was chosen for this work. A copy of the Specification No. 5, which describes the application of a waterproof cement mortar lining, such as was used in this case, will be sent, post free, on request together with a copy of the Handbook of Cement Waterproofing.

'PUDLO'

BRAND
CEMENT WATERPROOFER

This pond was constructed eight years ago and remains perfectly watertight to-day, when events have emphasised the wisdom of its provision. Many other emergency reserve water tanks are being waterproofed with 'PUDLO' Brand cement waterproofer, and will certainly prove just as satisfactory as this example.

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THE BUILDER

INCORPORATING

"ARCHITECTURE" AND "THE BRITISH ARCHITECT"

VOL. CLVIII FEBRUARY 9 1940 No. 5062

TOWARDS A BRAVE NEW WORLD!

AS a result of last Friday's Conference on "Problems of Social Environment and the War" there has been launched a movement which may take its place as one of the great advances of our time. It is no less than the setting up of a new Council representative of interests connected with planning, social services and environment, charged with the self-imposed duty of keeping within bounds such development as takes place during the war and of conducting research into germane problems which shall enable the post-war constructional activities to proceed upon lines of maximum efficiency, judged from the standpoint of human welfare and happiness.

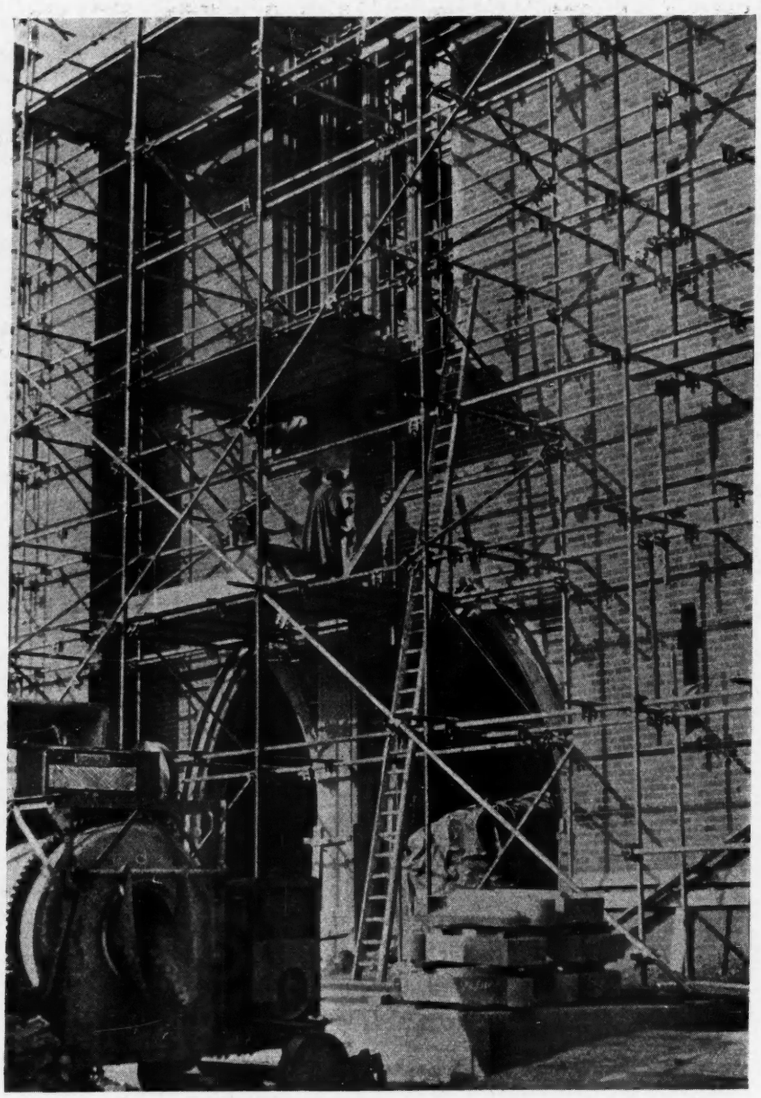
The magnitude of the task which the Council has set itself is enormous, the more especially as such powers of control as do exist are largely advisory and not executive. As against this, there are on the Council representatives of almost every body or institute working towards better planning and improved social conditions, the sum of whose influence on public, Government and Press is undoubtedly immense. Given a practicable programme it should be well within the power of the Council to exert a considerable influence for good.

A question which will occur to many is whether or not there is danger of the new Council merely duplicating the work of existing and component bodies. It was made clear that this possibility is well in the minds of those who have inaugurated this new body, and that the aims will be to settle a programme of research into the problems ahead and to delegate the various heads of research to the bodies most directly concerned.

In this the question of finance looms up and was, in fact, raised by several speakers at the Conference who wished to know whether the Council had sources of funds available which would not conflict with the efforts of existing organisations to raise money—efforts which had become increasingly difficult since the war. An assurance to this effect was given by Lord Balfour of Burleigh. It is more than likely, also, that the Council will be able to effect considerable savings by correlating the individual efforts of societies whose interests overlap, as a number inevitably do. This would be by no means the least useful part of its work.

This programme of research is no simple one to settle, for it is clear even from the discussions on Friday that expert opinions differ very considerably on certain subjects, of which the rehabilitation of existing towns as opposed to decentralisation is one only. Yet it is essential that the programme of research be settled and got under way speedily, for not until results are available will it be possible to begin shaping the general lines of post-war development. After that, the real battle—to get the results accepted and acted upon by Government, local government, industrialists, land owners and general public. The labour ahead will be tremendous, but will be lightened by a number of factors, among which are, first, the vastly greater pool of skilled technicians now available, and, second, that new spirit of regeneration—moral and physical—which has been born in recent months, a spirit of dissatisfaction with those ways of life and labour which had previously been blindly and unthinkingly accepted. If this new spirit can be harnessed to the new plans that will shortly be in the making, then the results in the form of a better, healthier and happier population will be very great.

The success of the Council's efforts must ultimately lie in the manner in which the general public takes them to its heart. For that reason planning research must keep constantly in mind the fact, sometimes forgotten, that our planning is not for gods but for men and women. An example of what we mean was given by Mr. A. W. Kenyon, who stated that one of the reasons for the speculative builder's success was that he knew what the public liked, whereas the architect too often was concerned to give the public what he thought it should have. We would endorse, therefore, Mr. John Gloag's suggestion "that the Council, in its deliberations, should keep in mind that they are dealing with human beings, the English variety, who seldom understand theories or appreciate logic."



THE PROGRESS OF GUILDFORD CATHEDRAL.

The photograph shows the South Transept of Guildford Cathedral, with Mr. Eric Gill working on the statue of St. John the Baptist, which is on a pedestal between the two main south entrance doors. The portion of the Cathedral now being built comprises the Chancel, the Crossing, the North and South Transepts, and Ambulatories, Chapels and Vestries to the north and south of the main structure. As will be seen from the photograph, a considerable height has been attained, the building now being up to the general level of 55 ft. above the ground, and the wood centering for the main vaulting is now partly fixed. The work is proceeding as quickly as is practicable with the older men and men not yet called up, and it is hoped to continue steadily to complete the roofing-in of the whole of the work now under construction. The architect is Mr. Edward Maufe, A.R.A.

NOTES AND NEWS

Building and the War:
Census of Stoppage of Work.

We are asked to say that all architects who have not yet made returns regarding the amount of building work stopped as a result of the war should send particulars to the offices of the Building Industries National Council, 85, Gloucester-place, W.1. The headings under which this information is desired are as follows:—

1. Nature of Scheme.
2. Type of Work.
3. Location of Work.
4. Whether for Public Authority or Private.
5. Approximate Cost of Scheme.
6. Stage Reached.
7. Reasons Given for Stoppage.
8. General Remarks.

A large number of returns have already been received, but it is clear that there are many architects in all parts of the country who have not yet sent in returns. It is important that as large a number of returns as possible should be received by the National Council within the course of the next 14 days.

"Lord Haw-Haw"
and Housing.

Broadcasts in English from Germany have suggested that the housing achievement of this country falls short of that of Nazi Germany. An examination of the figures (states a Housing Centre Bulletin) shows that, in fact, house production in Germany over the last six years has fallen far short of our own. Figures extracted from reports of the International Federation for Housing and Town Planning show that for the five years 1934-1938, 1,298,919 houses were built in Germany. In England and Wales, 1,669,941 houses were built during the five years ending March 31, 1939. The population of Germany (excluding Austria and Czechoslovakia) is about twice that of England and Wales, making the rate of production (having regard to the size of the population) only about half our own. There are also several indications that the standard of new accommodation is definitely lower than ours.

R.A. Summer Exhibition:
Days for Receiving Works.

Days for receiving works for the Royal Academy Summer Exhibition, 1940, are as follows: Water-colours, pastels, miniatures, painting in tempera, black-and-white drawings, colour prints, engravings and architectural drawings, Friday, March 29; oil paintings, Saturday and Monday, March 30 and April 1; sculpture, Tuesday, April 2. The hours for the reception of works are 8 a.m. to 6.30 p.m., except Saturday, March 30, when they are 8 a.m. to 5 p.m. Not more than three works may be sent by any one artist. Labels and forms can be obtained during the month of March only, from Burlington House, Piccadilly, W. The exhibition opens on Monday, May 6, and closes on Saturday, August 10.

The Architects'
Benevolent Society.

The Secretary of the Architects' Benevolent Society writes: "The South-Eastern Society of Architects has sent a special donation of £100 to the Architects' Benevolent Society. This generosity is doubly welcome at the present time, when so many members of the profession and their dependants are in need, and the A.B.S. is deeply grateful."

War Damage to Property:
Government Policy Restated.

In the House of Commons on Tuesday, Sir John Simon said that he had carefully considered the proposals of the Association of British Chambers of Commerce concerning the risks of war damage to fixed property, but had reached the conclusion that the Government policy, as previously outlined by him and confirmed by the Weir Report, could not be abandoned in favour of the suggestions. The view of the Government remained that the extent to which compensation could be given for war damage to property could be determined only after the end of the war, when the total extent of the damage was known, and in the light of the financial circumstances of the country at the time.

Building Unemployment:
Figures for January.

The monthly statement of the Ministry of Labour and National Service shows that on January 15 there were 101,571 more building operatives unemployed than at December 11 last. As compared with a year earlier, there were 16,086 more unemployed. It is pointed out by the Ministry that the count was taken on a day when, owing to the severe weather, work in the open was in many cases impossible. The total unemployed at January 15 was 257,851.

A Salvage Campaign:
Need for Iron Scrap.

Speaking at a Press Conference on Friday last, Mr. H. G. Judd, Controller of Salvage, Ministry of Supply, said that the Iron and Steel Department had scoured factories, workshops and mills and had got 80,000 tons of old iron, but there must be a vast amount still to be got. In works and offices where the accumulations were sufficiently large to interest the scrap merchant or marine store dealer, the materials could be sold for cash. But the appeal to the individual was based, not on the ground of private gain, but on the finer claim of duty.

COMING EVENTS

Tuesday, Feb. 13.—Air Raid Protection Institute. Mr. Norman Forster on "The Design and Installation of Services in Shelters." Royal Society of Arts, John-street, W.C.2. 8 p.m.

Tuesday, Feb. 13. — Housing Centre. Luncheon. Major T. Jackson on "Amenities and the Accommodation of H.M. Forces." 1 p.m.

Wednesday, Feb. 14. — Architecture Club. Visit to the A.R.P. Lighting Exhibition, Building Centre, New Bond-street, W.1. 4.30 p.m.

Friday, Feb. 16.—Institution of Mechanical Engineers. Annual General Meeting, Storey's Gate, S.W.1. 2.30 p.m.

Tuesday, Feb. 20. — Housing Centre. Luncheon. Miss Kathe Liepmann on "Housing and the Journey to Work." 1 p.m.

Wednesday, Feb. 21. — Incorporated Association of Architects and Surveyors (London and Home Counties Branch). Sir Alfred Hurst on "The Building Industry in War and Peace." 75, Eaton-place, S.W.1. 7 p.m.

Wednesday-Thursday, Feb. 21-Mar 21.—Housing Centre. Exhibition on "The Homes they Come From." 10 a.m.–5 p.m. Saturday, 10 a.m.–12 noon. Wednesday, Feb. 21. Reception. Speaker, The Rt. Hon. Margaret Bondfield, M.P.

Tuesday, Feb. 27. — Housing Centre. Luncheon. Miss T. Marriott, Secretary, Nursery School Association, on "Nursery School Children in War-time." 1 p.m.

Reinforced Concrete for Buildings:
National Code of Practice.

The Building Industries National Council has issued for publication in its series of National Codes of Practice a Code for the use of reinforced concrete in the construction of buildings, prepared by an expert panel under the chairmanship of Mr. H. J. Holloway. The publication of the Code with respect to this form of construction meets a long-felt need. It is issued with the approval and authority of all sections of the building industry. Its issue has been made possible largely as the result of the original work and recommendations of the Reinforced Concrete Structures Committee of the Building Research Board. The Code, intended for the use of designers and specifiers, does not differ from the technical requirements of the London County Council.

The National Council has set up machinery which will enable the terms of this Code to be revised from time to time so as to keep practice in consonance with structural developments and research. The price of the Code is 1s. 3d., post free, and is obtainable direct from the offices of the Council.

Society of Auctioneers:
Re-election of President.

At a meeting of the Council of the Incorporated Society of Auctioneers and Landed Property Agents held in London on January 26, Captain Bernard Thorpe, of Messrs. Bernard Thorpe and Partners, London, was re-elected President for 1940-1941. Mr. J. P. Boxhall, of Messrs. Powell and Powell, of Cardiff, was elected a Vice-President of the Society.

Professional
Announcement.

Mr. S. V. Thompson, P.A.S.I., announces that he is now in practice on his own account as a chartered quantity surveyor at 120, Carisbrooke-road, Leicester. (Telephone: 77348.)

IN 1915.

Extract from *The Builder*, February 5.

Now that the vague possibility of air raids over London has become a more definite probability, the safety of the wonderful art treasures contained in our museums and picture galleries has begun to excite some attention. Where the Elgin marbles in particular are concerned, we should probably be reminded that our original excuse for bringing them to London at all was that they were not properly protected in their original position, and that now we had them the least we could do was to preserve them at whatever cost or inconvenience to ourselves.

CORRESPONDENCE

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

War-Time Organisation of the French Building Industry.

TO THE EDITOR OF *The Builder*.

SIR,—It is almost a platitude to say that victory in this war depends upon the economical and efficient mobilisation of all our resources in the national interest.

The proper utilisation of the building industry, now greatly reduced and inevitably diverted from its normal activity, is of vital importance, for the industry employs 22.7 per cent. of all insured persons in this country and has an annual turnover of more than £400,000,000. It is essential that this potential energy be utilised to the fullest advantage. The expenditure of large sums of public money upon war buildings and construction need not be wholly wasted if the problem is given due consideration.

The French have dealt with the same difficulties in an extremely rational manner, and while it is hardly possible for this country to adopt the methods in their entirety, the underlying principles might well be applied by us.

The chief advantages are the maintenance of the efficiency and economy of the industry as a whole and the fact that war-time needs can be modified so as to create permanent national assets and thus eliminate waste.

The broad outline of the French scheme is indicated in the enclosed copy of a report from Lieut.-Col. E. Maigrot, our Corresponding Member, and is of such importance that it must arouse the greatest interest, not only in the building industry, but amongst the general public. Should you concur, no doubt you would prefer to present the matter to your readers in the form you consider most appropriate.

E. STANLEY HALL,
President,
Royal Institute of British Architects.
66, Portland-place, W.1.

Following are extracts from M. Maigrot's letter:—

"In France, as in England, the building trade (architects, contractors, clerks and workmen) is passing through a crisis of unemployment such as has hitherto never been reached.

"All private building industry is at a standstill. There is no longer any private clientèle. The corporate bodies (departments, towns and municipalities), with rare exceptions, are not even completing their building programmes commenced before the war. All efforts are being directed solely to work required in connection with the armament factories (gunpowder works, arsenals), to aviation programmes, and also to the housing of the populations which have withdrawn from districts once again visited by war.

"For all this class of work it was not usual to have recourse to architects, but the High Commissioner for Building and Construction, to whom I have the honour to be attached, gave me, immediately I entered the Department, formal instructions to seek means to procure employment for architects in the works of national importance (defence works) and at the same time to do everything possible in order that private enterprise might be called in to collaborate in Government works. . . .

"The idea was conceived, during the war period, of regarding architects rather as being on an equal footing with the Army services and of receiving remuneration which can be compared, according to the duties performed, with that of a lieutenant, captain, etc.

"This first task having been accomplished, the general principle is as follows:—

"The central armaments organisation in Paris prepare the general surveys with their group of architects, and in the local centres, that is to say, on the spot (dockyards, gunpowder factories and arsenals), another team of architects directs, ensures and controls the execution of the works. In order to connect the central organisation in Paris with the provincial organisations, 'flying' inspectors, so to speak, travel regularly from the one to the other and secure control.

"As regards the material execution of the works, the General Commissioner has had recourse to existing organisations of building contractors (federations or syndicates) in each district in France. He has regarded the chairmen of these organisations, so to speak, as front-rank men, to whom the task has been entrusted of distributing judiciously and with equity the works to be executed in the district. By so doing, the General Commissioner aimed at feeding local enterprise, as well as the artisans and all the small jobbers.

"His great anxiety was to revive during the war period the professional life behind the fighting zones, maintaining, and quite rightly, that that was the only means whereby the economic life of the nation could be supported, and thus prepare for the return to more normal life conditions in the future.

"This led him to consider the solution of certain problems, which for many years previously had remained in abeyance in the offices and departments, in order to seek without delay suitable means of settling them.

"On these lines, he studied important problems in connection with works such as, for instance, the slums which, in Paris alone, represent 7 milliards; he personally sought the requisite financial and technical assistance suitable to guarantee the carrying out of these works without, however, calling upon the State for any burdensome participation.

"The plans which he was able to devise and which he recommends are of such a nature that, on the other hand, by actually executing them, the works will prove an important source of revenue to the National Exchequer.

"He also devoted his attention to another problem, that of housing the refugees. . . . Building timber, completely prepared, finished and assembled, is forwarded from the assembling centre to the place where it is to be used. On their arrival, these standard type houses are erected on standard instructions, and instead of making the walls of wood, even double thickness, brick, ashlar, stone, etc., are used according to the district, briefly, the material which is there found. . . .

"Further, by employing the material available in the district and obtainable at the lowest figure, since it is used on the spot where it is made, this method enables recourse to be had, for carrying it out, to the artisans and local labour, the result of which is, although it may seem paradoxical, that when planned and executed on these general directions, the cost price of these huts which we thus build 'solid' is not appreciably higher than that of buildings of the same area and size built of wood.

"Another point he had in mind led him to look for and determine wisely the spots to be selected for the erection of these huts—namely, spots which, after the war, would permit of retaining these buildings, adapting them either for holiday camps, meeting places or halls, or paid-holiday camps, etc., all social problems which remained to be resolved and which will thus be partially solved with what is undeniably a saving in the finances of the nation, since, instead of being pulled down after the war, they would be used again."

Livelihood Census.

TO THE EDITOR OF *The Builder*.

SIR,—As Mr. K. J. Campbell has quoted me, I should be obliged if you would permit me to make some personal observations on the matters in question.

I adhere to my statement—my own computation—that the proportion of practising architects to assistants is about one to four, but, from the census figures, only one in eight of the assistants is a member of the R.I.B.A. Few assistants, outside public bodies, are over 30 years of age, and more than half are probably under 25 years old.

I wonder whether Mr. Campbell would let you have the following data:—

The number of members of the A.A.S.T.A.; the number of architect members and how many of these are members of the R.I.B.A. Have the members of the A.A.S.T.A., other than architects, special and automatic representation in their respective institutions?

Mr. Campbell will, no doubt, agree that an organisation's primary duty is to the members who support it and finance it. In a professional body such as the R.I.B.A., of some national and imperial importance, there are wider issues beyond membership, but this can hardly mean that a junior assistant in an office should be able to influence its affairs regardless of whether he is a member or not.

It is not an argument to suggest that facts of themselves are tendentious. Facts, of course, are sometimes irritating when they do not agree with theory, but they are valuable nevertheless. I was in a small minority when I supported a proposal for a census, but was surprised to find a year later that the original proposer was the sole opposer. Mr. Campbell himself makes some assertions which are not facts; true, the census is not complete and the analysis still less so, but the return is over 80 per cent. and is still coming in, supplemented by other data; the figures given, therefore, are fully representative and accurate.

Representation of the various sections and interests of members of the R.I.B.A. on the Council is proportionate and very fair. Every section has its place automatically and of right, not forgetting the A.A.S.T.A., an organisation many members of which are not architects, nor connected with the R.I.B.A. Assistants and junior members have also special committees of their own. This Royal Chartered Institute has permanent and Empire-wide functions to perform, and surely ought to be protected by its constitution against the sway of temporary or clique interests.

Criticism is a vital function of democracy, but it is of three kinds—idealistic but impractical, carping and destructive, constructive and practical. The R.I.B.A. has been subjected to a great deal of the former categories of criticism, but has received little of the latter type. Many of the suggestions recently made would entail the R.I.B.A.'s usurping the functions of the State.

A few more facts will disclose the limitations which restrict the activities of the Institute. It is the most important, but not the sole, architectural body in the country; its resources are not great; numerically it is a small element in the industry, controlling about 18 per cent. of the total expenditure on all types of building constructions. In spite of these facts, the general activity of the R.I.B.A. seems to me to bear very favourable comparison in its scope with that of any other professional body of a similar nature.

Such a body is not likely to improve either its position or that of its members by embarking gratuitously upon schemes

it cannot carry through, or assuming functions to which it is unsuited and which are outside its scope.

Mr. Campbell will, I feel sure, agree that the private practising architect, as well as his assistants, have suffered as a result of the war, and that what is needed is unity, not strife. It will be a sorry day for this country if institutions, which include trade unions, are subjected to infiltrations of inherently antagonistic elements by the process of forming cells or groups, after Fascist or Communist models. This must inevitably end in disruption, which only those who seek chaos can desire.

R. A. DUNCAN.

16, Harpur-street, W.C.1.

Architects' Benevolent Society: Maurice Webb Memorial Fund.

TO THE EDITOR OF *The Builder*.

SIR,—I should be grateful if you would allow me to call the attention of your readers to the above Fund, which is being raised as a memorial to the late Maurice Webb. You were good enough to print the original appeal which was issued, and I am glad to say that the response has been, as one would have expected, a generous one.

There are, however, many who with the fullest intention of subscribing have not yet done so, and as we are anxious to close the Fund at the end of February at the latest, when it will be decided with the Architects' Benevolent Society how to dispose of the money raised, I am sure this reminder in your columns will do what is required of it.

It is not proposed to publish a list of subscriptions, but later a list of subscribers will be circulated privately amongst those whose names are included. Money is needed for the Architects' Benevolent Society, and this appeal provides a means of helping the Society and also of paying a tribute to one who was held in great affection and who would have liked nothing better than his memory being honoured by assistance being given to the Society which claimed so much of his interest.

Donations, small or large, should be sent to the Honorary Secretary, Maurice Webb Memorial Fund, Architects' Benevolent Society, 66, Portland-place, W.1.

F. R. YERBURY, Hon. Secretary,
Maurice Webb Memorial Fund.
66, Portland-place, W.1.

Destruction of S. Lorenzo in Damaso, Rome.

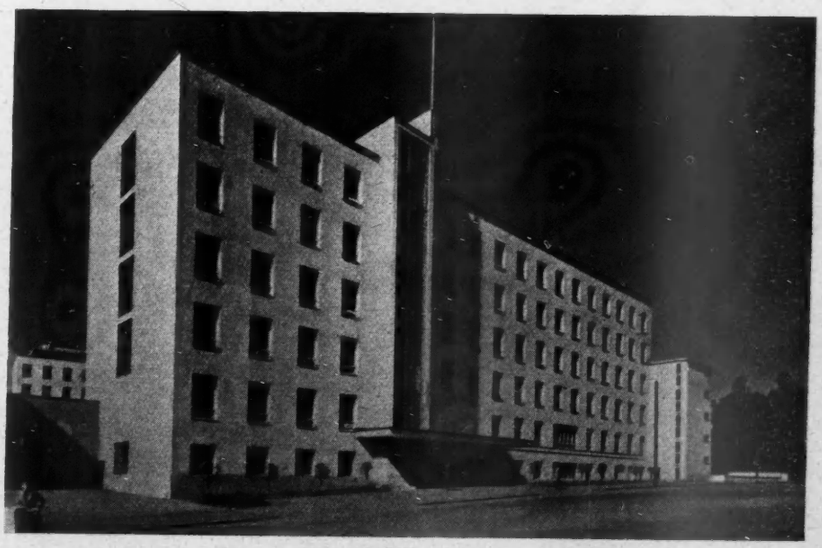
The letter on this subject which appeared in our issue for January 26 was written by Mr. H. V. Molesworth Roberts, whose name was accidentally omitted from part of our issue.—ED.

Additions to the "Green Belt."

The L.C.C. Emergency and Parks Committees report that some 230 acres of land in Kent and Surrey are to be added to the "Green Belt" and the Council is contributing towards the cost of acquisition. The areas concerned are 114 acres at Farningham, Kent, consisting mainly of woodland, and 115 acres adjoining Selsdon Wood, Farleigh, Surrey. During war time, parts of the areas which are not woodland may be used for agricultural purposes, on the understanding that they will be available for the public as soon as possible after the war.

THE BUS STATION, TURKU.

THE CENTRAL POST OFFICE, TURKU.



THE GYNAECOLOGICAL HOSPITAL, HELSINKI.

SOME RECENT FINNISH BUILDINGS.

WAR-TIME BUILDING PRACTICE

By R. Cotterell Butler, A.R.I.B.A.

8.—ROOF CONSTRUCTION FOR EMERGENCY BUILDING PURPOSES. I.—GENERAL DESIGN.

THE design of a roofing system for a light, semi-permanent structure introduces a number of considerations affecting choice of materials and methods of fabrication, which do not always apply equally to the remainder of the structure. Particularly in the case of structures based primarily upon the application of "mass construction" materials, there are often very sound reasons for adopting, for the roofs, an entirely different system. Where frame-and-panel buildings are concerned, the character of the roof is likely to be more similar to the remainder of the structure, but even so, considerable variations may be frequently introduced.

Although in previous articles of this series the question of roof design has been touched upon*, no major reference has been made where the development of substitutes for steel and timber has been under consideration. Roof design using timber or steel for the main structural framework is, of course, a matter of normal everyday practice, and one which up to the moment has been relied upon in most cases to solve the temporary structure problem. Particularly the wholesale use of timber for almost every emergency building purpose has been most unwise, although there is more justification for its use in roofing than elsewhere in the structure.

It is proposed here to confine consideration to structural systems which, while they may not be wholly independent of steel or timber, effect considerable savings in these materials compared with normal practice.

SUBSTITUTES FOR TIMBER AND STEEL.

The shortage of timber of building quality is already too widely realised to require any further mention here, and the need for the immediate development of substitutes (if the national building requirements of the war are to be met satisfactorily) appears at long last to be officially recognised.

The continuation of adequate supplies of steel for emergency building is a matter which has received much less attention, and although the production of steel may be carried out entirely within this country, and its supply—unlike timber—is, therefore, independent of overseas transport or international currency complications, yet the ever-growing need not only for the material itself for armaments of every kind and sort, but also for the workmen concerned in its production, means that limitations in its availability for building purposes are bound to occur.

In addition to these considerations, the use of a wide variety of materials for emergency purposes is bound to liberate a more extensive supply of men of military age than would be the case were everyone in a particular activity required for adequate production; by spreading the strain, the low-age groups might be made available in more industries. Again, the production of steel in this country is limited to a number of definite localities, and these are rarely if ever those in which the most extensive emergency building is likely to occur. The use of local materials would, without doubt, make for considerable economies of transport, effecting once again a saving both of men and material.

By an intelligent use of Portland cement and other *binders*, the walls and floors of light structures may be fabricated, if need be, without the use of either steel or timber of building quality, and without the development of any particularly complex or unusual fabrication system. In roof design, however, this is by no means so simple a case, and although by the use of various fibrous materials, or by introducing vaulting systems, both timber and metal may be eliminated, the effort is unlikely to be worth while unless the war assumes a much more serious threat to sources of metal.

Owing to the nature of a roof, tensile stresses must be provided for to an extent far in excess of the requirements of walls, and where mass-construction materials are to be applied, tensile reinforcement of some sort is inevitable, unless vaulting is used. Although it is just conceivable that vaulting might be applicable to a war time form of normal building activity, its low efficiency weight ratio would most certainly preclude its use for emergency structures.

The problem of the substitution of timber and steel in roof design, therefore, becomes primarily a question of the development of alternative forms of tensile reinforcement. The shortage of steel is not yet so acute that the economies effected by reserving its use for tensile reinforcement alone would be worth while, and at the moment the most intelligent course to pursue would appear to be the use of light steel reinforcement for main roof members, of steel or other metal mesh for slabs or secondary members, and of fibrous reinforcement wherever possible. Maximum economies in steel and the entire elimination of timber of building quality would thus be effected.

FABRICATION.

After the considerations which arise out of the limitations of supply, the fabrication system to be adopted, and hence the labour requirements, is the next important question.

Where wholly steel- or timber-framed roofs are being considered, an extremely high degree of fabrication may be successfully adopted. The roof frame may be prefabricated in units of considerable size, and the weather-proofing element either spread continuously over the frame *in situ*—as would be the case with bituminous felting, fixed *in situ* or in the factory; asbestos sheets, or cedar shingles, built up entirely in the factory; or multi-ply impregnated roofing units.

Where the timber or steel content is low, the degree of pre-fabrication is (owing to the weight and nature of mass-construction materials) likely to be correspondingly lower. Complete roof units would rarely be constructed at any great distance from the building site. There are, under these conditions, two main alternative forms of fabrication which may satisfactorily be adopted:—

(*a*) Weight-carrying, weather-resisting, and insulating elements, fabricated in works at normal production localities, transported to and assembled on site; and

(*b*) Necessary materials transported to site, and prefabricated in a site-factory into large elements—*in situ* work reduced to minimum.

Of these two general fabrication systems there can be no doubt that under favourable conditions the site-prefabrication system is likely to be the more efficient, where speed of erection is of the utmost importance; *in situ* construction having all the disadvantages which may be expected from a climate like that of the British Isles. The former system is, moreover, essentially a

* "War-Time Building Practice," *The Builder*, December 8 and 15, January 12

practicable one in the circumstances, the large-scale nature of most essential buildings schemes making the installation of the necessary plant and equipment on site a feasible proposition.

The advantage of site mass-production, outlined in connection with the construction of walls for emergency structures, applies equally to the manufacture of roof elements, and, when it is remembered that the roof will normally have to withstand more severe weather conditions than the walls, the advantages of a maximum reduction in the margin of error of the operative will be fully appreciated.

In order that site mass-production may function efficiently, it is essential that there should be a maximum efficiency in the actual conversion of raw material to finished form, otherwise (unless the source of material is either actually on site, or a no great distance away) transport charges on waste products may be excessive.

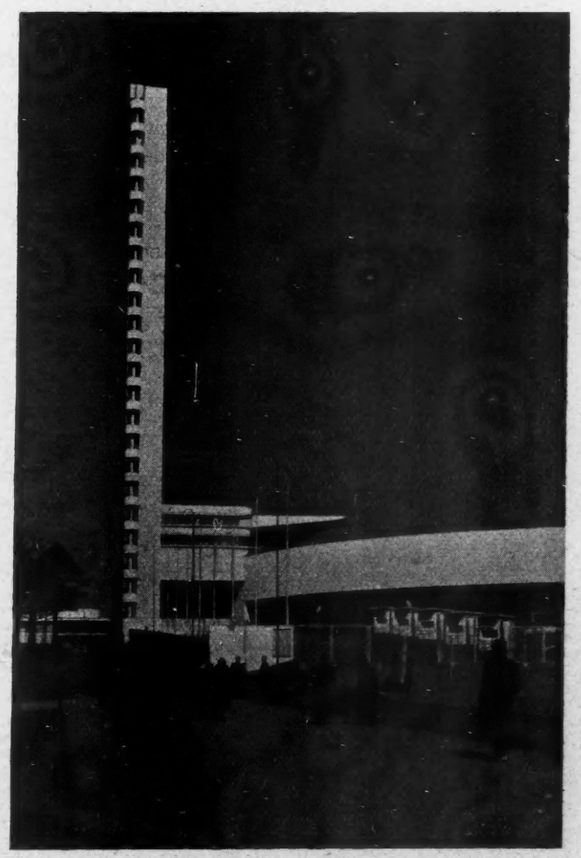
GENERAL DESIGN.

Neglecting considerations of material for the moment, it is of value to consider briefly the characteristics—as applicable to emergency building requirements—of the two main categories of roof, *i.e.*, "flat" roofs, and pitched roofs.

PITCH.

Broadly speaking, any roof having less than 10 deg. pitch may be termed a "flat" roof. In normal practice a flat roof in comparison with one having an appreciable pitch effects an economy of roofing material, with a potential reduction in insulation value. Where emergency building is under consideration, however, this analysis is not always an accurate one.

While a flat roof does, in comparison with a pitched one, effect a saving in actual roofing material, where a demand for a maximum internal content of the structure is made, the flat roof effects an economy of roofing material only at the expense of additional walling.



THE OLYMPIC GAMES STADIUM, HELSINKI.
DESIGNED BY M. YRJÖ LINDEGREN.

This comparison is, of course, true only where a pitched roof of the open type is being considered. Now the pitched roof which is open to the ridge does not, of course, provide a higher degree of insulation than a flat, and we see therefore, that where for reasons of economy the storey height has to be taken to include the roof space, the only economic comparison which may be made is between the cost of roofing and the cost of walling.

Where the storey height—and thus the walling value—is fixed, economic comparisons between flat and pitched roofs are then upon a basis of insulation properties. Costs must then be compared between the flat roof insulated with special materials and the pitch roof having natural air-space insulation.

These important considerations may be summarised as follows (the cost of materials for flat and pitched roofs being taken as equal) :—

Cubic Content Basis (equivalent insulation).
† Flat Roof / Open Pitched Roof.

FLAT ROOF is advisable where:
Cost of roofing is greater than cost of walling / Equivalent cubic content of the structures.

Insulation Basis. (Equivalent walling values).
Flat Roof / Closed Pitched Roof.

PITCHED ROOF is advisable where:
Cost of insulation is greater than additional roofing material. / Equivalent insulation standards (flat : insulation) (pitch : air space).

Considerations of pitch are also affected by materials, and under war-time conditions it may be expected that the material will normally determine the pitch to be used; certainly it is extremely unlikely that æsthetic preference will be allowed to influence the issue.

Roofing systems having almost continuous external weather-resisting surfaces (or at least a weather-resisting skin which, even though composed of a number of elements, incorporates an adhesive bond to unite them), may, of course, be pitched to considerably lower rakes than roofs composed of elements having little bond, depending upon gravity to prevent moisture penetration and upon the rake of the roof to prevent the elements being lifted by wind pressure.

The selection of a suitable roof system will depend upon economic consideration, taking into account a large number of factors—as in the case of wall design.

To avoid any impression that it is possible to base a decision purely upon "architectural" grounds, the summary of factors already set out in a previous article of this series may be repeated.

‡ The availability of materials required.
National / Other essential war-time undertakings; Local / Transport facilities.

‡ Cost of material / Estimated amortisation of structure.

‡ The availability of the necessary labour.

‡ The overall efficiency of the fabrication system.

‡ The Efficiency / Cost ratio for: weather resistance, thermal insulation.

‡ The production-time factor—(National war requirements).

‡ The durability factor / Possible peace-time uses of the structure.

‡ Maintenance costs (Estimated war period).

Often many materials which normally require a "high" roof pitch will be outside the scope of emergency building requirements on grounds other than the additional framework required for their support, although in a few cases they may be found an economical proposition, particularly where there are large amounts of such materials almost on the site. Another factor

† Note: The oblique stroke / used throughout this article indicates the first item considered against the other.
‡ No attempt has been made to arrange these factors in any order of importance.

which may, in certain circumstances, justify a material which would normally be considered unsuitable for emergency building is the advantage which may sometimes be gained from reducing vertical walling to a minimum, and constructing a high-pitched open roof, having an adequate insulation value produced by the use of linings. Since some form of tie between the outside walls is almost certain to be necessary, this scheme is limited to structures having sub-divisions which may occur at the cross-ties, or those of sufficient size to enable the position of the ties to be above normal head level. However, roofing materials which demand a high pitch are usually of small dimension per element, and this automatically means an increase in fixing costs, from the aspects of the supporting material required and the labour necessary for fixing.

Again, most small elements are of such a size that there are inherent limitations in the structural strength of the material; with this is usually associated a low density/efficiency ratio.

The considerations which—in the case of wall construction—suggest that advantages in overall efficiency are to be obtained by minimising the number of joints (and, therefore, increasing the size of elements), lead to much the same conclusion when roofing questions are examined. In this connection it is, of course, a saving in labour and supports, rather than a saving in labour and jointing material. Since it is even more important to effect a saving in those materials which provide support across spans than in those materials used for jointing wall elements, every attempt should be made to employ the largest size roofing element obtainable.

In addition to the advantage of large elements, stiffness is also important. It is most essential that elements should always be employed at their maximum safe span, and if necessary suitable platforms should be provided so that the roof, during fixing operations, does not have to carry loading far in excess of normal. In light structures for emergency purposes, it is quite incorrect to apply loading values which are normal in peace-time practice, and undoubtedly very large quantities of valuable material have so been wasted. Already many light roofing systems which will provide absolutely adequate stability and weather resistance under normal climatic conditions would not withstand the severe stresses which the sudden point-loading of a workman crawling or even walking on the roof would produce. The capital cost of providing light, moveable platforms for roof fixing would be more than offset by the saving in material which would be effected.

WEATHER RESISTANCE.

The weather resistance of a roof—probably more than any other part of a structure—is largely influenced by time. Roofing which may be perfectly efficient over a period of, say, five years, may be subject to rapid and accelerating disintegration after that time. This is most probably due to the fact that roofs in most circumstances are not called upon to support anything more than their own weight, unless perhaps an occasional fall of snow. Having, therefore, little or no supporting function to perform, this singleness of function often results in the practical adoption of a measure which is nearer that of the theoretical minimum than is usually to be found elsewhere in the building industry.

This criterion means that in the construction of roofs for definitely temporary purposes, a higher standard of efficiency should be possible than for any other part of the structure where support as well as weather resistance requires consideration.

If a building is definitely required to have only a temporary purpose, then there is no need whatever to provide roofing having an excessive life, unless this can be done without increase in cost—which is unlikely—or without the use of materials which would have a greater value elsewhere in the war-time programme—which is still more unlikely.

Where a building is estimated to have a definite "after-the-war" value, such considerations do not, of course, apply. The value to the community of any structure should be most carefully assessed. There can be no possible excuse for littering the country with sub-standard structures built in imperishable material throughout, any more than there can be for hurriedly undertaking the production of flimsy structures having a potential amortisation factor far below that which the social value of the type of structure and its location suggest. Whatever the complexity of the remainder of the structure may result in, there is every opportunity for the roof to be selected with its durability factor clearly in mind, and even should a building roofed for a five-year purpose be afterwards required for a longer period, the reproofing of its weather-resisting skin should not be an impossible undertaking, and in any case would be much better than a delay at this critical time owing to too high a criterion being applied.

THERMAL INSULATION.

The insulation of any roof should as far as possible be in keeping with the value of the walls and floor of the structure. It is true that an emergency building may have walls possessing a high thermal insulation value, owing entirely to the type of walling material which happened to be most readily available, and that to provide a similar standard for the roof would raise the cost out of all proportion. This instance will not be frequent, and it would certainly be unwise to design (unless it could not be helped) either the walls or the roof in excess of the other.

Just as a temporary building may have its roof reproofed at a later date, in the same way its standard of insulation may be increased even more easily. Provided suitable materials are economically available, the air-gap system will, of course, be found the cheapest—insulation being effected almost automatically. Where low-pitched or flat roofs are used, some form of applied insulation may be necessary, but in many instances the actual roofing material itself may have an adequate value, according to emergency standards.

FIRE RESISTANCE.

The desirability of selecting a roofing material on the grounds that it presents a certain resistance to the effects of incendiary activities is a somewhat debatable point. Economic factors naturally play an important part in such a question.

In the case of evacuation structures, one might argue that these would automatically be erected in a "safe" area, and that measures of fire protection would therefore be totally unnecessary. This is of course only a theoretical argument, a "safe" area being not only a purely relative term, but all standards of safety being bound to alter during the course of any war. The safety of an area may be affected by the locality of hostilities at any one time, or by developments in the enemy's armament, and these constantly changing factors are bound to effect equally varying safety values.

One must therefore infer that, except where a structure is definitely situated in a danger area, economic considerations will usually preclude the adoption of any extensive measures designed to effect a high resistance to fire, yet, where such resistance is to be obtained without additional cost, it should of course be adopted, provided all other considerations are equal.

(To be continued.)

Subjects previously dealt with in this Series are :—

"The Field of Activity," October 13.

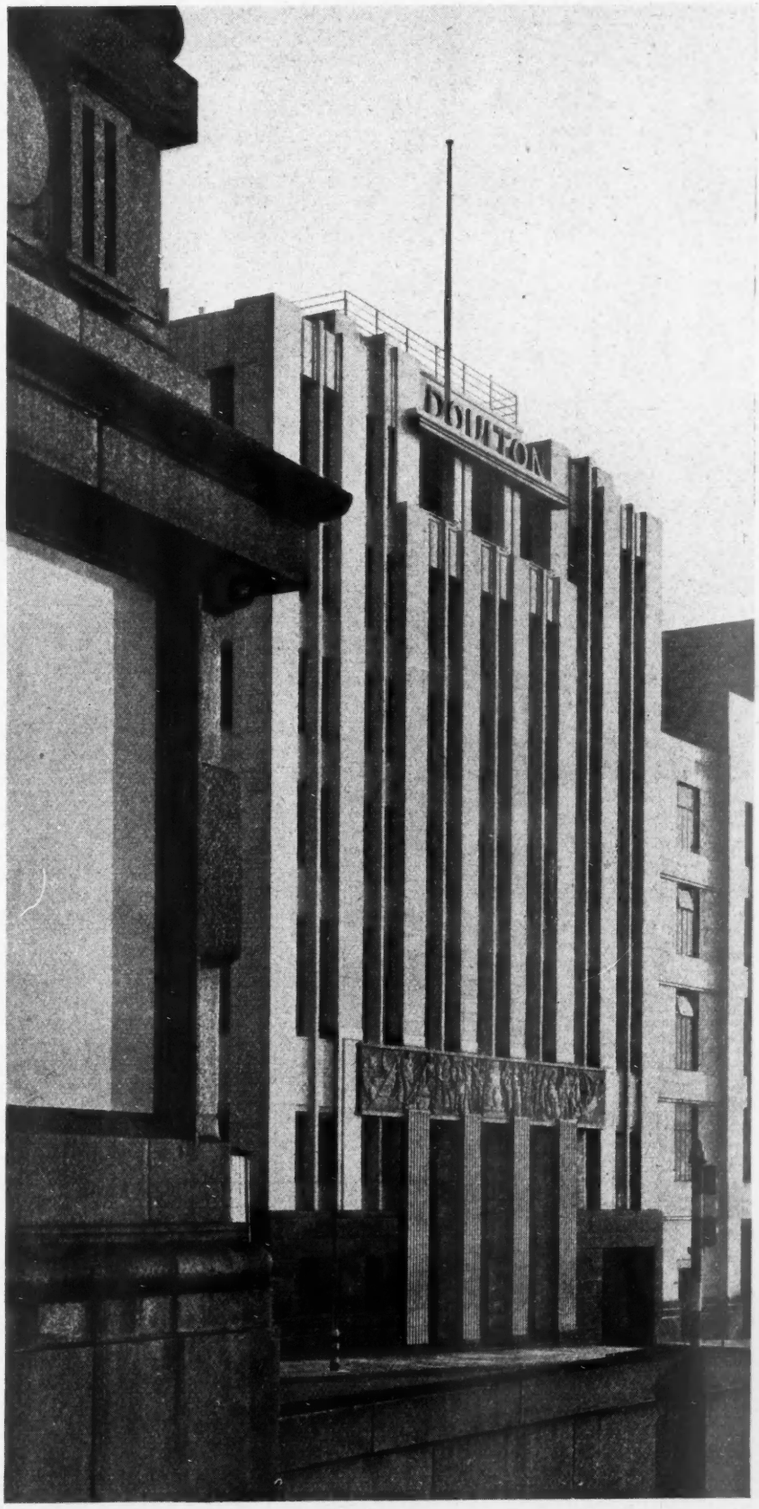
"Billeting Accommodation," November 3, 10, 17.

"Development of Materials and Constructional Systems as Substitutes for Timber," December 8 and 15 and January 12.

Copies of these may be obtained from the Publisher.

"DOULTON HOUSE," ALBERT EMBANKMENT, LAMBETH, S.E.

MESSRS. T. P. BENNETT AND SON, ARCHITECTS.



VIEW FROM LAMBETH BRIDGE.

For a century and a quarter the name of Doulton has been closely associated with the Lambeth waterfront, and it is appropriate that this firm, which over sixty years ago gave Sir Gilbert Scott the opportunity to design the remarkable "Gothic Revival" building known to many thousands of travellers to Waterloo, should once again have been responsible for adding an architectural improvement to the Albert Embankment.

Site.—The new premises—comprising main office building, Memorial Hall and Institute—have been designed by Messrs. T. P. Bennett and Son, and occupy a 70-ft. frontage to Albert Embankment facing Lambeth Palace and at the east end of Lambeth Bridge, and extending the full depth of the site with High-street, Lambeth, on the east side. It previously comprised partly a tidal dock with entry from the river under the Albert Embankment, and partly the site of old potteries, the dock being formerly used for the entry of coal barges carrying fuel to these potteries.

Main Building.—This covers the portion of the site previously occupied by the dock and comprises offices and showrooms forming the new head office. The entry of the river to this dock was sealed off by means of a concrete retaining wall some 3 ft. 6 in. thick, the dock being emptied and tanked with asphalt to form extensive basement accommodation on two floors. Concrete raft construction carries a steel-frame with hollow-tile floor construction, brick panel walls and glazed terra-cotta facings. This building consists of the two floors of basement referred to above, ground and six upper floors for the front part, and showroom wing and one upper floor for the rear portion, provision being made here for four further floors to be built at a later date if required.

On the ground floor the building is entered from the Albert Embankment into a main entrance hall rising through two floors with glazed balustraded balcony to first floor on three sides and coffered oak ceiling. This hall, which is well lit by means of three bronze doors and big windows over, is fully panelled with walnut veneer flush panelling cross-banded with burr walnut. The special display and main staircase hall is similarly treated but lower in scale. The whole of the flooring for this section is Imperial Travertine with Tinos marble margins and

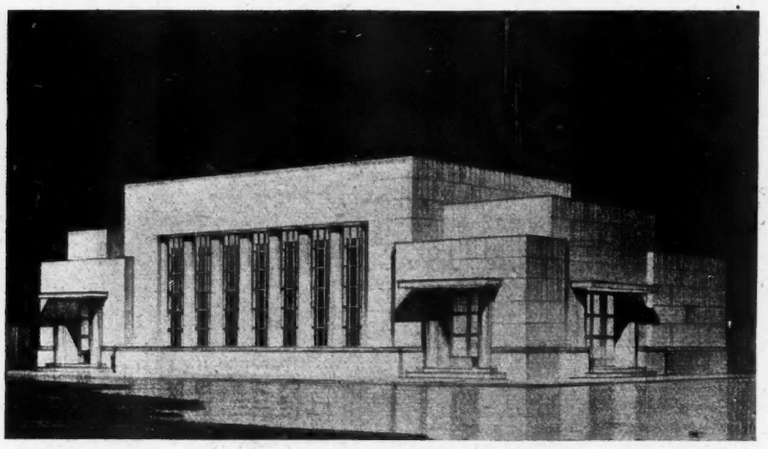
DETAIL OF MAIN FRONT. THE DECORATIVE PANEL, IN SALT-GLAZED STONEWARE, IS BY MR. GILBERT BAYES, R.B.S.

coved skirtings. At the end of the special display and on the main axis of the building, giving a through vista from the main entrance, is the main showroom, comprising a high open hall with special display bathrooms at the east axial end and side display bays on either side for special sanitary fittings and equipment.

Certain other special rooms on upper floors are fully panelled as, for instance, the reception and board rooms on the second floor, which are in Indian Laurel. "Cullum" sound-proofing floors have been used throughout, finished generally with 3-in. Pyinkado strips. The lavatories are generally arranged on the east side of the building, and are tiled to a height of 5 ft. and with vitreous tiled floors.

The whole of the main building is faced with glazed terra-cotta slabs and blocks, except for the rear offices on first floor, where reddish-brown facing bricks have been used. A notable feature of the main façade is a salt-glazed stoneware sculptured panel by Gilbert Bayes in full colour, depicting "Pottery through the Ages," with a similar smaller panel on the north façade.

The building is heated by means of an accelerated hot-water system and "Vectairs," a separate boiler providing the hot water services. The boilers are fired by means of automatic stokers, with solid fuel stored in overhead bunkers which are filled directly from the private roadway on the south side of the site. A fully equipped instrument panel records flow and return temperatures and CO_2 content, and incorporates pump and motor starters and indicators. A plenum plant is installed to ventilate the basement units, the kitchen on the sixth floor being independently ventilated. Electrical wiring throughout is installed in an underfloor duct system enabling both light and power points to be tapped at 3-ft. intervals in any room. Two lifts serve the various floors.



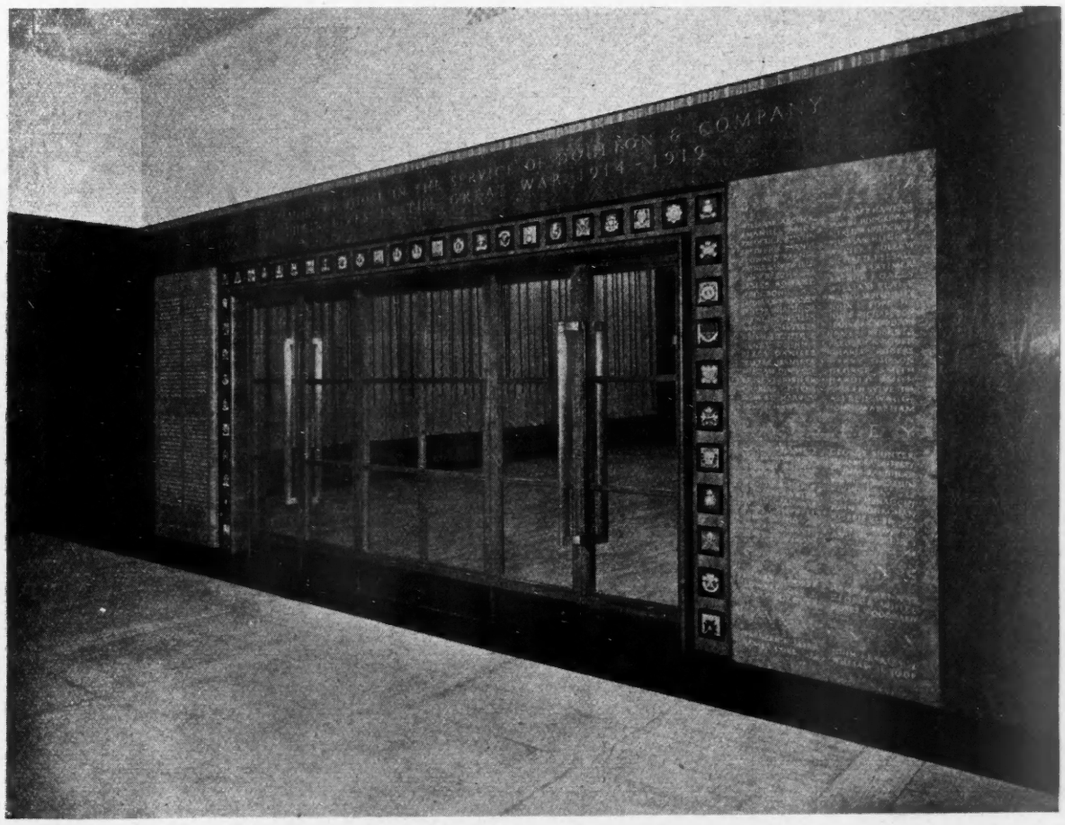
THE MEMORIAL HALL. (FROM A PERSPECTIVE.)

MEMORIAL HALL.—At the rear of the site is the new Memorial Hall, of brick construction with steel stanchions and beams for the auditorium portion only, and faced with dove-grey mottled glazed terra-cotta slabs with green relieving band at plinth level. The auditorium seats about 250 people and has a buffet counter and well-equipped kitchen. There are also an adequate stage, dressing-rooms and lavatories. This hall will be used by the staff. Heating is by means of a gas-fired hot-water system, and there is also an extract ventilation plant for the auditorium.

THE INSTITUTE.—This building, which links the Memorial Hall to the rear of the showroom wing of the main building, is of brick construc-

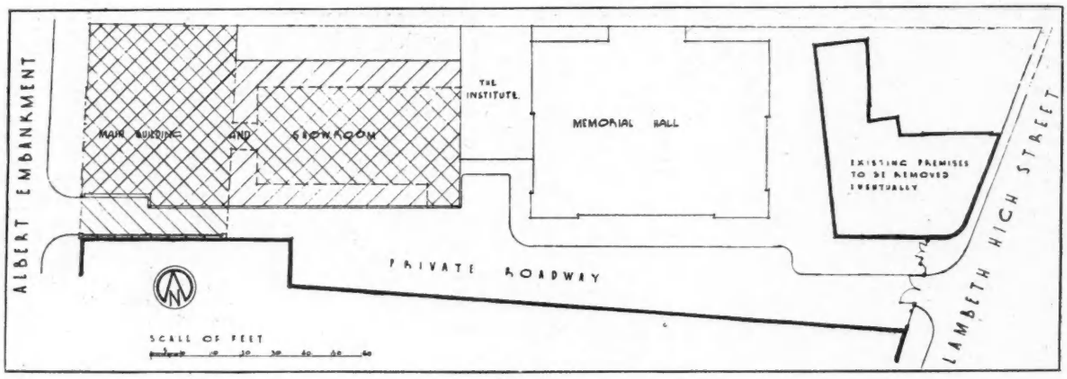
"DOULTON HOUSE," ALBERT EMBANKMENT, LAMBETH, S.E.

THE MAIN ENTRANCE HALL.



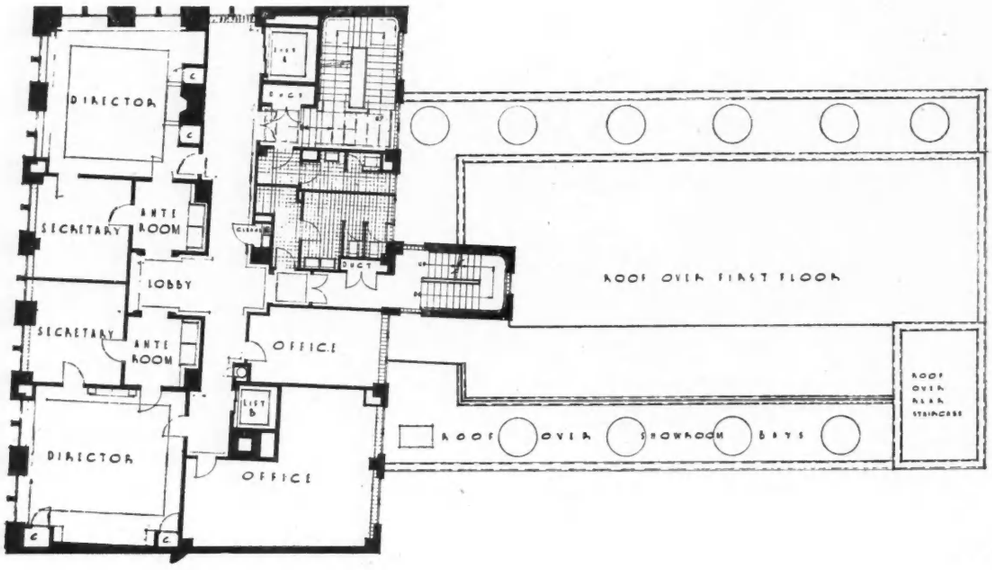
VIEW IN MEMORIAL HALL, SHOWING WAR MEMORIAL AND ROLL OF HONOUR.

MESSRS. T. P. BENNETT & SON, ARCHITECTS.

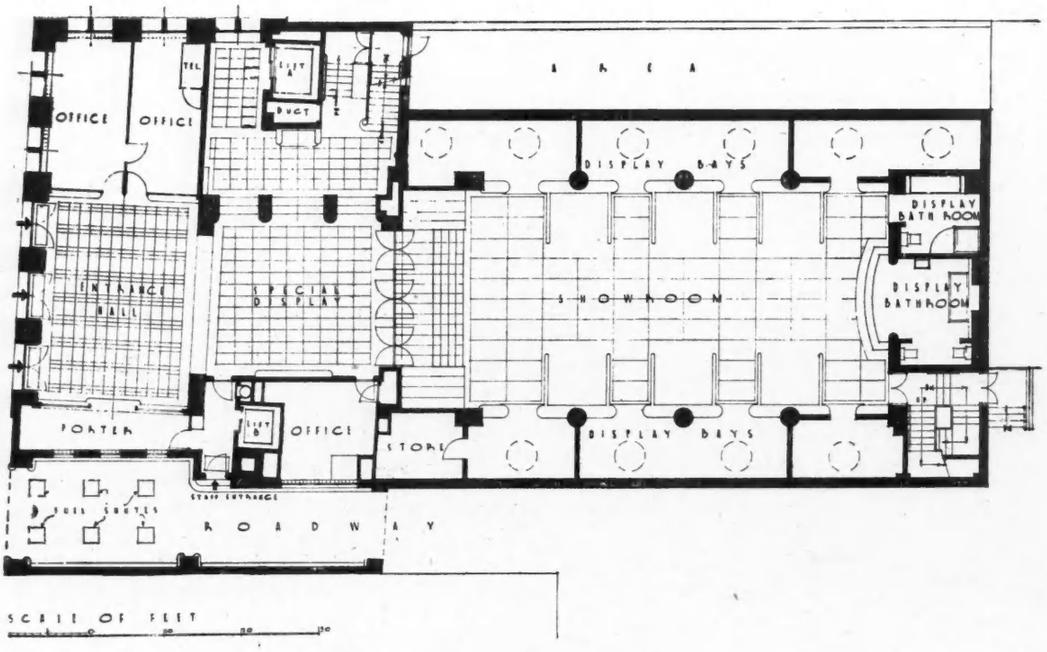


THE LAYOUT

THIRD FLOOR PLAN



GROUND FLOOR PLAN



"DOULTON HOUSE," ALBERT EMBANKMENT, LAMBETH, S.E.

tion externally, faced with terra-cotta slabwork to match the Memorial Hall, and stud and plasterboard partitions internally. It comprises entrance lobby, bar and buffet, billiards-room and lavatories. Heating is from the main building by means of "Vectairs."

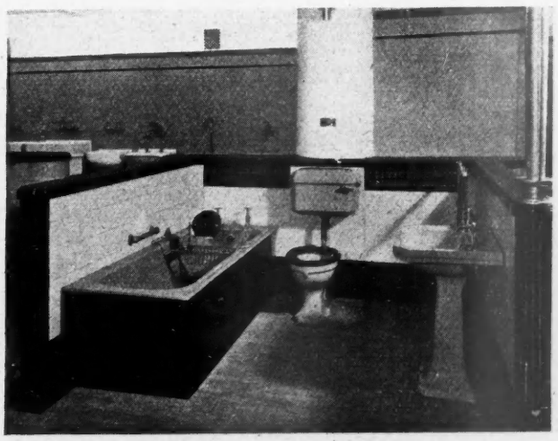
The whole of the glazed terra-cotta used in these buildings was made by Doulton's, as were the stoneware panels referred to previously. Doulton sanitary fittings are installed throughout.

The consulting engineers for foundations were Messrs. B. L. Hurst and Peirce, MM.Inst.C.E., Messrs. Gardiner and Theobald being the quantity surveyors. The general contractors were Messrs. Holland & Hannen and Cubitts, Ltd., S.W.1, the foundation work having been executed by Messrs. Trollope and Colls, Ltd. Specialists and sub-contractors engaged were:

Structural steelwork, Redpath, Brown and Co., Ltd.; lifts, Waygood-Otis, Ltd.; hollow-tile floors, Attoc Blocks, Ltd.; electrical work—main building, Troughton and Young, Ltd.; electrical work—Memorial Hall, Bective Electrical Co.; strong-room doors, Chatwood Safe Co., Ltd.; dividing grille in strongroom, Bostwick Gate Co., Ltd.; metal windows, Crittall Manufacturing Co.; plumbing, Matthew Hall, Ltd.; heating, hot water and ventilation, Matthew Hall, Ltd.; gas services, Gas Light and Coke Co., Ltd.; asphalt, General Asphalte Co., Ltd.; sanitary fittings and glazed terra cotta ware, Doulton and Co., Ltd.; travelling cradle apparatus, Palmers Travelling Cradle and Scaffold Co.; cellar flaps, Haywards, Ltd.; lightning conductor and flagstaff, J. W. Gray and Sons, Ltd.; lantern lights and laylights, F. A. Norris and Co., Ltd.; roller shutter, Haskins Rolling Shutters; soundproof floors, H. W. Cullum and Co., Ltd.; terrazzo, Diespeker and Co., Ltd.; wood flooring, Hollis Bros. and Co., Ltd.; steel partitioning, Sankey-Sheldon, Ltd.; facing bricks, Henry J. Greenham; floor and wall tiling, Carter and Co.; flush doors, Joinery and Builders' Supplies; steel platform, Allen and Greaves, Ltd.; bronze entrance doors and decorative metalwork, railings, etc., Conrad Parlanti, Ltd.; marble flooring, Anselm Odling and Sons; pumps, Pulsometer Pump Co.; electric clocks, English Clock Systems; flat roof finishings, Frazzi, Ltd.; electric light fittings, Troughton and Young, Ltd.; fibrous plasterwork, G. J. Green and Son; gas incinerators, Wm. Sugg and Co.; special joinery and panelling and granolithic facings, Holland and Hannen and Cubitts; acoustic tiling, Newalls Insulation Co.; cellulin flooring, Cellulin Flooring Co.; door furniture, Carter and Aynsley; special door furniture, showcases, special screens and glazed balustrading, Courtney, Pope and Co.; neon sign, Franco-British Electrical Co.; non-illuminated sign, Franco Signs, Ltd.; special wood carving and lettering for war memorial, E. J. and A. T. Bradford; kitchen equipment, James Farquharson and Sons; cast-stone steps, kerbs and pavings, Empire Stone Co.; bronze mat-well frames, Comyn Ching and Co.; special furniture, carpets and curtains, B. Cohen and Son; rubber flooring and mats, North British Rubber Co.; coatrails and hangers, A. J. Binns, Ltd.; paints and varnishes, Nobel Chemical Finishes, Ltd.; special fireplaces, Bratt, Colbran and Co.; travelling pulley block, Herbert Morris, Ltd.; bronze nameplate, Buckleys (London), Ltd.; steel office furniture, Roneo, Ltd.; fire extinguishers, Merryweather and Sons; electrical dimmer control panel—Memorial Hall, F. H. Pride, Ltd.; cinematograph equipment, Woollons' Ciné Service.

THE BOARD ROOM

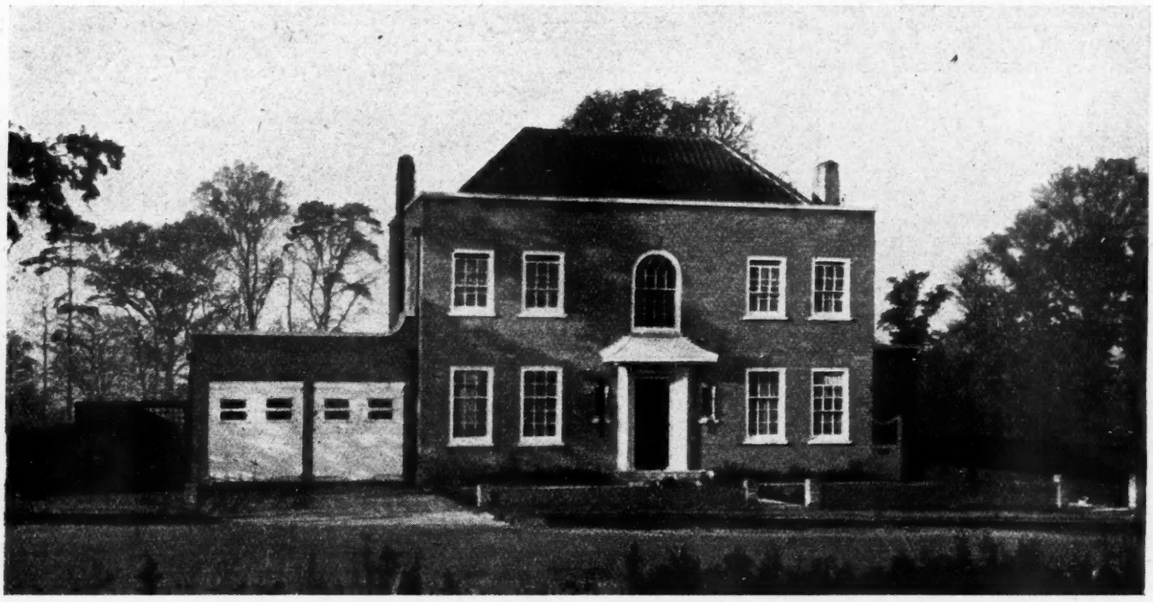
THE LEDGER AND ACCOUNTS OFFICE.



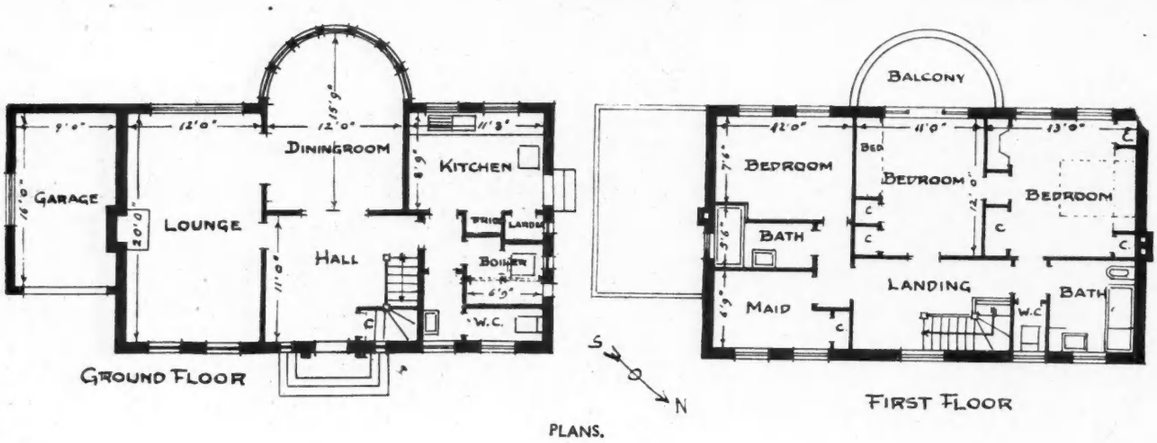
DISPLAY BAY IN SHOWROOM.

"DOULTON HOUSE," LAMBETH, S.E. MESSRS. T. P. BENNETT & SON, ARCHITECTS.

"QUEENSWOOD": A HOUSE AT STANMORE, MIDDLESEX.



THE ENTRANCE FRONT.



PLANS.

GARDEN FRONT

THIS house at Stanmore, Middlesex, was executed by Messrs. John Garlick (1910), Ltd., in brickwork of a bright pinkish-grey Dutch brick, with stone cappings and dark-grey pantiled roof.

MESSRS. CLYDE YOUNG, F.R.I.B.A., AND BERNARD ENGEL, F.I.A.A., ASSOCIATED ARCHITECTS.

AIR RAID SHELTER, CHILTERN COURT, BAKER STREET, W.

MR. S. A. HEAPS, L.R.I.B.A., ARCHITECT TO LONDON TRANSPORT.

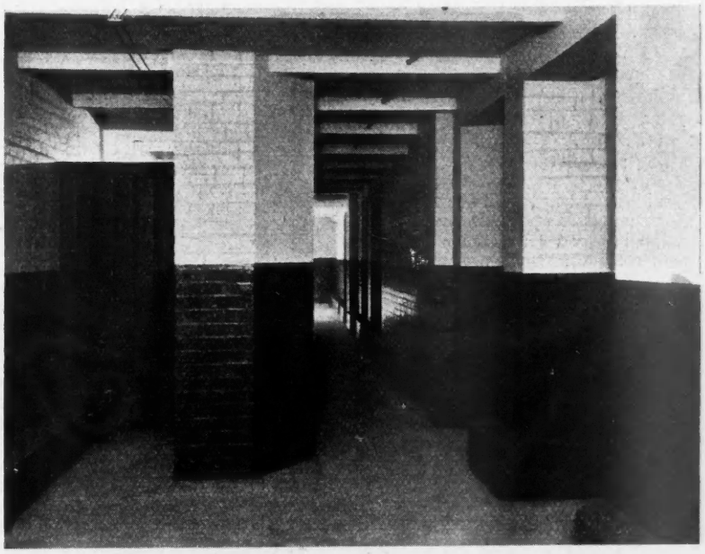
PLANNING.—Protection for approximately 300 persons is provided in this scheme against high-explosive blast, splinters, and collapse of building; no attempt has been made to render the structure immune from a direct hit. Exits, planning, etc., are governed by existing site conditions, and it was decided to divide the area available into a series of compartments each to hold about 50 persons, seating accommodation being also provided around the compartments.

CONSTRUCTION.—Walls are 13½ in. brickwork supported on concrete foundations, which in turn serve as crush seating accommodation. Roof is constructed of concrete 12 in. thick, with 7-in. by 4-in. R.S.J.s at 18-in. centres embedded. Wrot shuttering was used, and this was afterwards painted to match the walls.

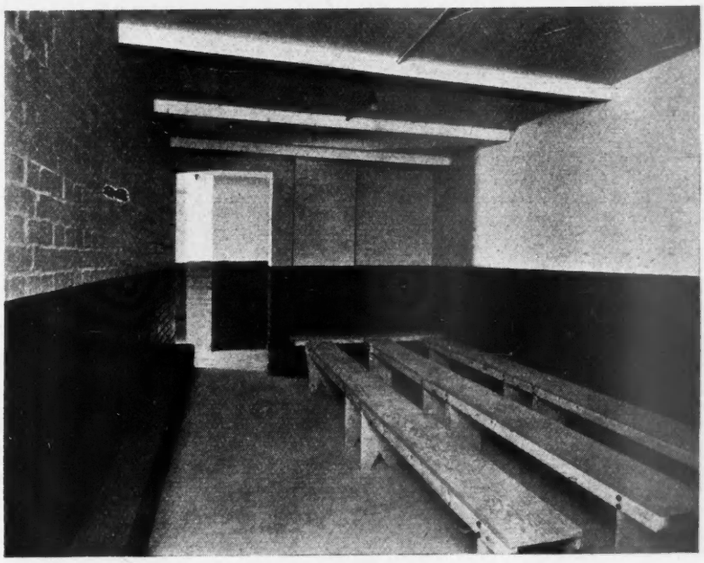
A separate roof is provided over the shelter as a protection from the numerous hot-water pipes and water-mains crossing the existing basement ceiling.

FINISHES are as follows: Floor, granolithic on existing concrete; walls, cream distempered with grey-painted dado; and ceiling, wood shuttering painted cream.

VENTILATION is by natural means, a floor area of 6 sq. ft. per person being allowed with foul air extracts in the ceiling. Sanitary accommodation in the form of "Elsan" closets is provided for both sexes. The contractors for the scheme were Messrs. Ford & Walton, of Westminster.



VIEW ALONG CORRIDOR.



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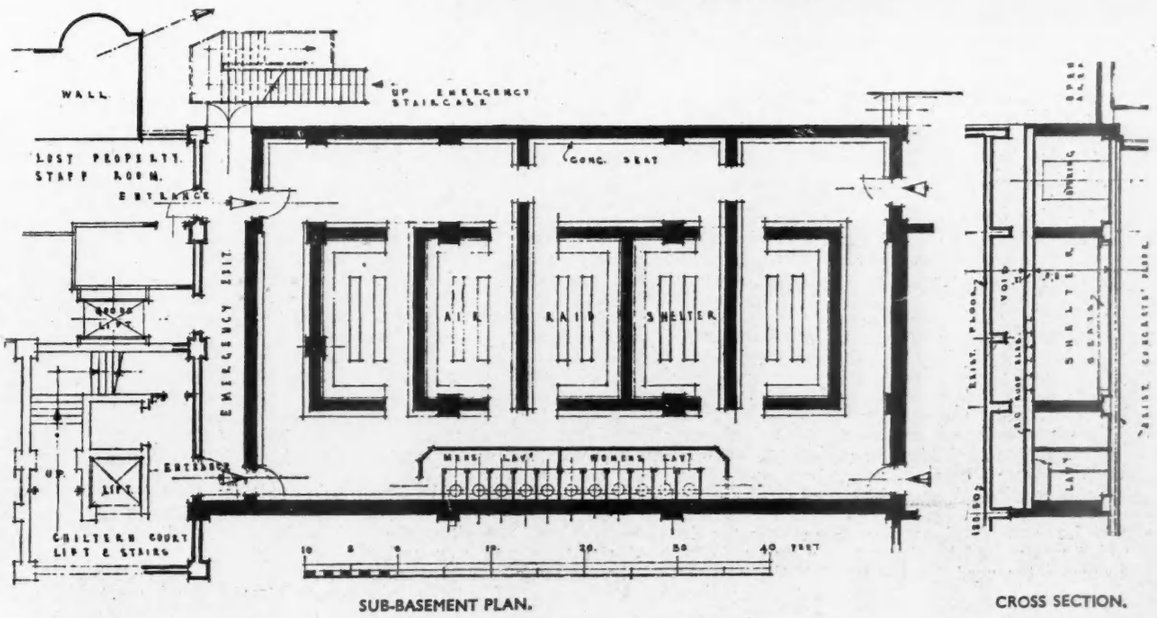


SUB-BASEMENT PLAN.

CROSS SECTION.

SOCIAL ENVIRONMENT AND THE WAR

FORMATION OF NEW COUNCIL

A CONFERENCE on Problems of Social Environment and the War, organised by the Housing Centre, was held at the R.I.B.A. on Friday, February 2.

The morning session was presided over by the RT. HON. THE LORD BALFOUR OF BURLEIGH, who said that their object was to decide whether they should set up a new body representative of all interests connected with planning and environment. Such a body would do two things. As he saw it, the objects of the proposed Council would be : (1) to do research and see whether it could settle on the proper form of this planning; and (2) having done that, to sell its goods. It was a happy coincidence that the Barlow Report on the Distribution of Industrial Population should have appeared the day before the Conference. What interested many was to find that the one difference between the majority report and the minority report concerned the nature of the powers to be given to the body which everyone agreed ought to be set up.

PROFESSOR SIR WALTER LANGDON-BROWN, LL.D., M.D., said that recent developments were making successful co-operation in social life increasingly difficult. He could not regard flats, even when equipped with swimming pool and squash courts, as homes fit for children to live in. The increase in the number of flats and the fall of the birthrate were not merely coincidental. "Only childism" had become a prevalent form of neurosis. That, however, was not the aspect to which he wanted to call attention; rather was it to the effects of those huge mushroom dormitories which were springing up all round London on the health of their occupants. He might take as an example a Middlesex village which a few years ago had less than a thousand inhabitants and which now had a population of nearly eighty thousand. Such things produced problems of their own. He was filled with admiration for the way in which the physical side of these problems was being tackled—the public health administration, the sanitation, the provision of schools—but he was rather appalled at the absence of psychological background. "We have been taken unawares," said the speaker, "just as were the industrialists of the nineteenth century. The jerry-builder has outstripped the town planner, and every month is making the position more difficult. To quote Dr. Stephen Taylor: 'We have allowed the slum which stunted the body to be replaced by a slum which stunts the mind.'" The late Sir Ebenezer Howard had intuitively realised their danger, but his foresight had been insufficiently regarded. Decentralisation of industries was one of our crying needs, and the garden city was a model towards which we should look, where there were opportunities for renewing those communal interests that were necessary to both mental and physical health.

Social Services Not a Luxury.

MR. G. SALTER DAVIES, B.A., said that he felt very strongly that the social services—to use that large phrase—were not merely a luxury that we could afford in time of peace, but that must be dropped in war time; they were not something that was simply a pleasant habit, but were in fact a vital part of the functioning of the community. This war would not last for ever; it would be followed by peace, and on the temper, the health and the education of our people would very largely depend the kind of peace which would follow the war. As we all knew, the social services were of vital importance and they were suffering very badly. It was possible to see, for example, how the lag in building which was caused by the last war, and which created the need for the housing schemes and housing policy of the last peace, was being repeated in this war, which, at a time when so many builders were out of work, seemed at least unfortunate. The same thing was happening in other directions also. "So far as the attitude of the Government and of public opinion is concerned," said the speaker, "we need a very real reawakening, a counter-attack on the part of those who are responsible for running the social services against the prevalent apathy and the feeling that we have other and more important things to do, and that winning the war is everything. No one will say, of course, that winning the war is not the most important thing before us; we all known that; but my own view is that the social services all round, and even the amenities of the social services, can be maintained not in spite of the war, but, if you like, because of the war.

"We think, therefore, that a Council which is sufficiently representative and important to attract the attention of Government departments, Government officials and local authorities when it wishes to direct their attention to some weakness, to something which is not being done, and which is sufficiently powerful to command a certain attention from the public when it speaks, is a very great necessity at this time; and it is our proposal that such a Council should be formed to-day."

A Resolution.

The speaker then proposed the following resolution (subsequently approved) that

> "This Conference, believing that the welfare of the people depends on sound environment for the individual, is resolved that a Council should be established of not less than thirty members who, either as individuals or as representatives of organisations, are interested in the relevent problems, and that the immediate objective of this Council shall be to promote, through research groups and by other means, the planning of social environment on a national scale and to make widely known the need for such planning."

The following names were put forward for the Council : Professor Patrick Abercrombie, Lord Balfour of Burleigh, Mr. G. Salter Davies, Sir Ronald Davison, Mr. L. F. Easterbrook, Mr. Lionel Hichens, Sir Walter Langdon-Brown, Mr. Max Lock, Miss A. M. Lupton, Mr. Henry Morris, Mr. G. L. Pepler, Mr. A. C. Richmond, and Mr. W. Harding Thompson.

MR. W. HARDING THOMPSON, P-P.T.P.I., F.R.I.B.A., who represented the Royal Institute of British Architects and the Town Planning Institute, said that the R.I.B.A. gave its whole-hearted support to the formation of a Council such as had been outlined by Mr. Salter Davies. Town planning and town building, the two functions of the planner and the architect, were the basis of our social environment, and obviously without a sound foundation in those matters we could not attack effectively all the problems of the social services—education, housing, and so on. The speaker drew attention to the manner in which the French Government had, as one would have expected, quite logically organised the whole of the building industry and the architectural profession to assist in dealing with their war-time problems, so that new settlements which were established in war time should take their place in the general development of the country in a long-term policy. That was all to the good, and to-day, when we were spending an immense amount of money throughout the country on camps, hospitals, Government stores, depots, aerodromes, and so on, it seemed to be of very great importance that all the skill of the country should be mobilised to see that those new features of the town and countryside became part of the pattern of our permanent civilisation.

The Town Planning Institute was very deeply concerned in the problems under discussion, and not only the war-time problems, but particularly the problems of the very difficult period of reconstruction which must follow after. We all had very unhappy memories of the aftermath of the last European war, and we did not want to see that happen again. The Town Planning Institute had given evidence before the Royal Commission whose Report was published two days ago and was supported by the R.I.B.A. The Institute strongly urged the setting up of an authority to control and regulate the planning and location of industry, and, with industry, the industrial population. For thirty years planners and social reformers had been advocating that policy and no effective action was taken. At the beginning of this war, in about four days about four million people were voluntarily evacuated from our great centres of population. We were not prepared; hence the problems which had to be faced now with regard to the lack of social services throughout the countryside, and the host of other problems connected with transport, and so on.

MR. A. L. HOBHOUSE (County Councils Association) said that the attitude of the local authorities was something like that of patient oxen waiting for new administrative burdens. It was not surprising that they might look with suspicion on any fresh body whose deliberations might add to their already heavy load, but he thought he could say that active members of local authorities and officials alike would welcome a clear and comprehensive plan upon which they could base their heavy and varied work. At the same time, if a body of the kind suggested was to be set up, it was very desirable to make it clear that the Council was not just another body duplicating work which was already being done; it must fill a definite need. One other general *caveat*, more from the point of view of the man in the street, was that we were a practical nation, and were impatient of large-scale planning. The planning must be on practical lines, easily grasped by the non-expert. It should appeal to the common needs of the individual. It should be capable of gradual and experimental adoption. The emphasis should be on the ultimate saving to the community, not on the need for wholesale expenditure. Last, but by no means least, there should be borne in mind the importance of circumventing and undermining vested interests rather than frontal attacks.

A Suggested Atelier.

MR. GEORGE L. PEPLER, F.S.I., P.P.T.P.I. (Chief Town Planning Inspector, Ministry of Health) said he thought that the subject on which the Conference would like him to touch was how far those engaged on statutory planning would welcome the setting up of a Council such as was proposed in the resolution. In so far as the Council made research one of its objectives, it could really be of very great help indeed to the statutory planner. It was in that field that it could do the most service. It could also do valuable work in "getting across" to the general public the relationships between cause and effect which the general public did not understand and which it was not exactly the function of the official planner to explain. We were in a much better position to-day than we were at the end of the last war, for at least two reasons. First of all, since the last war a considerable number of new schools of planning had been established. Secondly, in the Town Planning Institute we had now a large body of qualified planners.

"I should like to suggest," concluded the speaker, "that a very important undertaking of such a Council should be the provision of

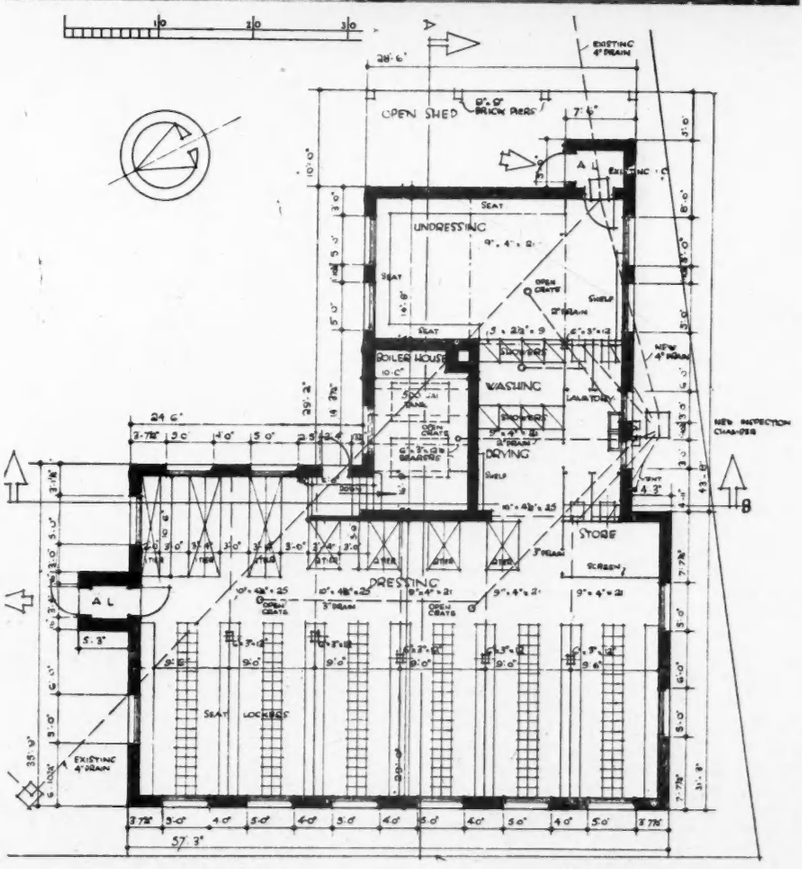
an atelier, so that it will be possible to apply the general principles and general ideas that will be forthcoming from the various bodies and people represented on the Council to particular areas, and try them out.

Miss A. M. Lupton (Vice-Chairman of the Housing Centre) said that in the slum-clearance campaign ten years ago some of us saw the Minister of Health at the time being carried always farther than he had meant to go, simply by the force of public opinion. We saw the thing working in front of our eyes, but we stopped short then of what we ought to have done. If at that time we had pursued what we knew to be right, and had forced the Government to stop the concentration in London, we should not have been landed as we were now in this awful mess with evacuation. We knew what ought to be done, but we were daunted and did not carry it out to the full. This time, however, let us determine to follow the wise people who were advising us, and see that effect was given to their wisdom.

Mr. G. H. Jack (C.P.R.E.) said that the new Council might be of the greatest possible assistance in considering ways and means by which the very large body of architects who work voluntarily on panels might be made much more use of than was at present the case.

Planning for Leisure.

Mr. E. Sandford Carter (National Council of Social Service) emphasised the importance of the social angle in planning. It was deplorable to think that between two-thirds and three-quarters of the workers in this country were engaged on mechanised tasks which gave very little outlet for individuality, and that they escaped from them into their leisure hours to the same mechanisation. That kind of thing had a very important bearing on planning.



A DECONTAMINATION SQUAD DEPOT, WANDSWORTH.

MR. H. W. TEE, M.INST.C.E., BOROUGH ENGINEER AND SURVEYOR.

Mr. John Gloag, Hon.A.R.I.B.A., speaking with regard to the composition of the Council, said he was terrified lest it be filled with "ologists." He therefore suggested the moral amendment to the resolution: "That during their deliberations they should keep in mind that they are dealing with human beings, the English variety, who seldom understand theories or appreciate logic."

Lord Harmsworth (Garden Cities and Town Planning Association) pledged the support of that Association to the new movement.

Mr. E. J. Carter, A.R.I.B.A., said that the question must be in the minds of many: "How will this new Council, if established, stand in relation to the very large number of other organisations which already exist?" He thought he could speak for the intentions of those who were concerned in initiating the Conference when he said that what they had in view was not a body which would have as its primary objective an index of societies who ought to be co-ordinated out of existence, but rather that there should be a body which would have the power, on account of its personnel, its intentions and its prestige, to assist the work of all the societies that were working in conformity with the ideals set out in the resolution.

Mr. F. J. Osborn (Hon. Secretary, Garden Cities and Town Planning Association) thought it was very important that any new organisation should not simply reproduce some existing organisation; and some of the speeches made that morning could be interpreted to give the impression that that was a possibility. He thought that that should be cleared up, so that they might know what it was that they were starting and how it would function in relation to the component societies. "Is it," he asked, "to be a money-finding organisation? My own society has concentrated on an attempt to get national planning, and we brought pressure to bear on the Royal Commission, which has resulted in its Report going very largely in the direction which we desire. We find that we cannot get enough money, particularly since the war, and we do not want another body to be started which will make it more difficult for us to carry on our work. I am not opposing the resolution. If some of the work could be parcelled out by the Council to the different societies, it might get over the difficulty."

Mr. Peter Scott (Order of friends) said that the Council's suggestion of "wholeness"—that not only housing experts but doctors, psychologists and others should be brought in—was most encouraging. He hoped that the new Council, instead of attempting itself to prepare a plan and then impose it on the country as a whole, would try to stimulate groups of people in the different localities to take an interest in their own localities and regions.

Mr. Ronald Chamberlain (National Federation of Building Societies) stated that plans were being prepared for the erection, at the end of the war, of a model self-contained town on a 7,000-acre site near London. It would not be a dormitory suburb.

In reply to questions by Dr. Hilliard, the Chairman said that in many cases there must be existing organisations doing the very work which would be included in the scope of the work of this new Council, and in that case it would be able to delegate particular subjects to particular bodies. It was possible, however, that some other problem would arise which would require separate research, possibly by a sub-committee of the Council. He, personally, had always wanted to see research into the effect on land values of high housing subsidies. As to finance, he believed that if the Council was set up with the right people there would be sources of funds available which would not conflict with the efforts of existing organisations to raise money.

The resolution was then put to the meeting and was carried unanimously, after which Sir Reginald Rowe (Chairman, Housing Centre Executive Committee) proposed a vote of thanks to the Chairman.

AFTERNOON SESSION.

At the afternoon session, presided over by Lord Horder, a summary of the morning's proceedings was given by MR. MAX LOCK, A.R.I.B.A., A.A.Dipl.

In his opening remarks the CHAIRMAN said that if he were asked whether during war we could continue our ordinary routine social services at the 100 per cent. level, his reply, in popular parlance, was, "Don't be silly; of course we can't." War had a prior claim and carried with it a prior policy. The prior policy was that we must win the war; if we did not win the war, then God help our social services! "What would I suggest that the Council should do?" said the Chairman. "I think that at the present moment the Council should act as a field force to bring expert criticism to bear upon our present emergency social measures, to decide how they are acting and which of them are worth retaining. In other words, the Council should act as a sensitive recorder of public needs and reactions.

"Then I think that the Council should act upon the Legislature all the time, constructively, bringing pressure to bear at the right moment for retaining what is useful or protesting against something which is not useful. Thirdly, the Council should canvass the interest of the citizen, so that he understands and makes use of the nexus of old and new services which exist for his benefit. Finally, I think that the Council should report back to this Conference in this place, if it is still here, in six months' time, and the Conference should then decide whether it has been able to justify its continued existence."

Education.

Speaking on the subject of Education, MR. HENRY MORRIS, M.A. (Director of Education, Cambridgeshire), said that we had to find a new instrument of modern education, and there was only one possible instrument, and that was the new town or city. Surely it was in the articulation of such a town that our architects would find not merely employment but justification, and in which our artists would find not merely employment but justification. The modern town plan should have as its principle not engineering or hygiene alone, but culture.

MR. E. A. A. ROWSE (Director, School of Planning and National Development) suggested that we needed a training in collaboration, a scientific approach to the subject of collaboration, which should be placed before every officer and official in particular, and before every citizen as well, to enable them to live at peace with their fellows and to work with them for a common cause.

MR. OGILVIE (New Education Fellowship) said that it had taken a war to enable us to get some of the children out of the worst centres of population into the fresh air of the country. When the war was over, were we going to relapse into the situation which we had before, or were we going to take steps to see that every child had its proper share of fresh air and the benefits of the countryside? Many architects, he understood, were interested in the question of camps. The camp, if well planned, would provide one of the greatest educational instruments that we had ever had, if only people were not deterred by the practical obstacles which, of course, would be mentioned whenever the question was raised.

The Problems of Industry.

MR. W. L. HICHENS (Cammell Laird and Co.) felt that if a strong case were made out for industrial planning, the Council would win industrialists over to their side. He also felt that it would be of real benefit to industrialists if there were in existence a body which could advise them where they could best place their factories. He was glad that the Government had decided to publish the Report of the Royal Commission on the geographical distribution of the industrial population of this country, which appeared the other day, and which seemed to him to be an extremely valuable piece of work. "That Report having been published," said the speaker, "I have noticed suggestions that, of course, it is a very good piece of work, but we must put it to bed for the rest of the war, and there it will be, comfortably tucked up in bed, at the end of the war, when we can take it out and see what it is all about. Now that, I think, would be a lamentable thing to do, for now is the time when we ought to be preparing for action, and, indeed, when we ought to be taking action. The question, as I see it, is one of real urgency."

He urged the Council, therefore, to make one of its central objects the pressing upon the Government the importance of appointing at once the authority which was recommended in the Report of the Royal Commission.

MISS J. ADBURGHAM said that the location of industry was the basis of all proper planning, and that had not been entirely overlooked in the years since 1925, since active town planning had been going on in this country. Anyone who had been up the Tyne when the shipbuilding yards had been silenced by economic depression would know what was meant. She had mentioned that because, said the speaker, she wanted to make the point very definitely that we did depend upon satisfactory industrial development for every other satisfactory development.

MR. F. J. OSBORN (Garden Cities and Town Planning Association) referred to the Royal Commission's report on location of industry. It was, he said, a most remarkable thing, and marked a very great stage forward, that in an official document of that kind we had now reached the stage where the public were advised to control the size of towns and the distribution of industry. That was a tremendous step forward for the whole planning movement, and it was something which we should study and develop further. The town and country planning section was, he thought, in fairly good hands, but there was a wider aspect of planning—the relation of all those things to the public services and to life as a whole. There was need for some thought to be given to the relation between planning conceived simply as the use of land and planning of all the other things which also had to be studied individually by individual societies.

Agriculture.

MR. RICHMOND (Land Settlement Association) said that there was one extremely important aspect of planning which affected the countryside, and that was not merely planning its amenities, but planning the life of the country and planning for the settlement of the country. Many thousands of the men who came back from this war would want to get back and establish themselves on the land, just as was the case after the last war. With proper organisation there was no doubt whatever that a very large number of people could be successfully employed and settled on the land, on the basis of organised production, organised buying, and organised selling. The problem demanded thought and care, and we ought to be thinking about it now.

Housing.

MR. A. W. KENYON, F.R.I.B.A., suggested that speculative housing was a problem which required very serious consideration and research. The speculative builder had closely studied the requirements of his clients. He knew that people would buy a house on a busy road rather than in a quiet cul-de-sac or quadrangle; that a single house would sell more readily, if people had the extra money available to buy it, than a semi-detached house, and also that he could not easily sell houses that were built in blocks of four or more; yet architects realised the difficulty of obtaining good street architecture with single houses and pairs of small houses. Here was scope for co-operation with the speculative builder, who had become very well informed of the requirements of this type of property, and who, he was sure, would welcome the opportunity of collaborating with planners and others who were interested.

His next point was the effect of the present evacuation on living in the future. This might play a very large part in the future housing of the population. Many large businesses which had in the past considered it essential to have their offices built on expensive sites in the heart of the City of London and other large towns were now finding that they could carry on their work in the country. We knew of firms which had built towns for their workpeople, and we might well see this carried a stage farther by other firms, many of which had sports grounds for their staffs but had not yet considered their housing. This might not necessarily mean building new towns; they might well become small community groups. They could be like our small villages, but with proper facilities for shopping, transport, schools, and other social facilities. This was a question which should be studied now, even though all the necessary information would not be to hand; an investigation could be made into how evacuation was working from those who had been evacuated and from the many large firms who had left the large industrial towns.

Lastly, in regard to the housing of the lower-paid workers, had we paused sufficiently to consider whether these working-class people wished to be housed in large blocks of flats or whether they would prefer to live in the smaller type of house? "I ask this question," said the speaker, "because I sometimes feel that in our desire to make people live as we think they ought to live we may be failing in our efforts."

MISS ELIZABETH DENBY said that she had been a little troubled to hear that the very impressive Council which had been formed was thinking in terms of a garden-city movement which was started thirty years ago, because thirty years was a long time, and during the next thirty years our statisticians had discovered that the population was going to decline. Did we want new towns? We had begun to think on completely new lines of the location of industry. Did we want to start industry in new areas? Everything was so much in the melting pot that we could not run back to thoughts of thirty years ago, but must think in terms not of 1940 but of 1945. Why flats *or* cottages? Why not both? "Do not," declared the speaker, "let us get a fixation about starting new towns until we are sure that the old ones, with their services and traditions and the love of their old residents, have reached their maximum size, until we are sure that they have the right industries in them, and that, if they have tendered to become a little derelict, new building and new industries will not revive and help them. Let us make our old towns into garden cities first, and then, if we find that with our decreasing population there is need for new towns, let us make new towns."

MR. BREEZE (Secretary, Guinness Trust) thought that the answer to whether the workers preferred to live in flats or houses was that the workers preferred to live near their work.

MR. EUGEN KAUFMANN said he did not believe in the probability of any appreciable housing activity while the war lasted, however much he regretted the fact and all its implications. All the more certain was it, therefore, that the task to be solved after this war was over would be at least as great as, and probably far greater than, that which confronted this and other belligerent nations after the last war. It was then that the work which the Conference hoped to stimulate would be needed.

The subjects of "Health" and "Recreation" were also discussed, and PROFESSOR PATRICK ABERCROMBIE, in winding up the proceedings, said that there was much material for study, and before we started on theories for planning we must get our foundations properly and duly laid with a survey of the conditions, with a study of what was suitable and what was unsuitable. The Council would not set up overlapping committees; it would use the various bodies as a mouthpiece, if necessary, and use them for prosecuting research, and there would be no fear that the Council would attempt to take the place of those organisations any more than the C.P.R.E. had done.

"ORGANISATION OF THE BUILDING INDUSTRY"

"THE Heavenly Twins of the Building Industry" was how MR. J. MURRAY EASTON (President of the Architectural Association) described his guests, Mr. George Hicks, M.P., and Mr. Richard Coppock. This was at the meeting of the Association held at 36, Bedford-square, W.C.1, last Tuesday, when the subject under discussion was the Organisation of the Building Industry.

Mr. Hicks said his observations were made in order that this great industry might be able to give advice to the country. To those whose lives were bound up with the building industry, no other question was so important at the present time as that industry's organisation. It was in a bad way, and it was necessary for all interested to bring as much brain power to the problem as they possibly could. An estimate had been made with what data were available, and according to that estimate something like £200,000,000 worth of building work had been suspended or abandoned since the outbreak of the war.

The Industry and the Government.

The Government was resolved to win the war; to this end it had concentrated all the resources of the nation, material and human. The needs of the war had subordinated all others. Practically, the regulations and restrictions laid down by the Government prohibited any building excepting such as it conceived was necessary for the national effort towards victory.

It was computed there were 160,000 building trade operatives unemployed apart from those who had been laid off on account of the severe weather, and it was to be expected that this unemployment would increase. The Government was in control of all resources, not only in this industry, but in others, and in those circumstances we must expect unemployment to increase.

The Government was allocating such building work as was permitted to about one hundred or more building firms; this was another case where master builders were experiencing a very rough time. Mr. Coppock and he had been able to break up to a very large extent the idea of handing over contracts of many millions of pounds to one or two firms, instead of utilising the vast resources of employees and technical staff of the smaller builders by allocating contracts in smaller units. But even if there were a thousand master builders employed by the Government, there were, roughly, fifty thousand in the country; so that forty-nine thousand were on the way to Carey-street. There was a little local A.R.P. work, but we did not know how much longer that would last. In the architectural profession he understood there were from 10,000 to 15,000 unemployed.

Thus unemployment applied with increasing rigour to one million people directly in the industry, and to another million in associated industries such as those producing materials. A proportion would be drawn into the fighting services; the Government had been urged to let out to contractors the work that it had to do in France, but this advice had not been accepted; instead, there had been a very big recruitment into the Royal Engineers, and about 15,000 or 16,000 building trades operatives had been taken over to France behind the lines. Of those left behind, only a fraction would find employment in Government work.

Need for a Programme.

In considering the organisation of the industry we must forget what it was before the war, because a fresh condition had been evolved. We must have new ideas, and all things must be on the basis of the present. Here was the industry in a state of stagnation; it was vitally important to the nation to conserve it. It would be criminal folly to leave all this plant and machinery to rust, criminal folly if all this knowledge and experience were thrown to waste. So also with the technical abilities of architects, surveyors, managers, foremen, and others. The services rendered to the community by the industry were as necessary now as at any other time; the need for housing was still here, and so also with industrial building, and building for the arts, culture, and civic purposes. Moreover, after the orgy of destruction, the one industry that would be required above all others would be the building industry.

At present, building requirements were essential for the prosecution of the war. There was, for instance, evacuation. Of the mothers and children moved to reception areas on the eve of the war, 59 per cent. had returned home. But the danger was not removed; no one knew what would happen in the development of the war. The evacuees might have to be sent back to the reception areas. The authorities ought to have realised that it was against nature to keep mothers and children tied down for months under conditions temporarily devised in the beginning of the war. If a long war was expected, a vast building programme should have been undertaken for the evacuees. To provide the homes for them, claims should have been made on the industry and extraordinary efforts made to find substitute materials.

More detailed and satisfactory A.R.P. work should have been undertaken and long-range aspects of the war should have been reviewed. Fundamentally, the war was the occasion for a vast upheaval in the life of the people. There had been an enormous drift from east to west not only of people but of businesses, industrial undertakings, and services of all kinds. Many firms and businesses would remain in their new localities, so that new housing was needed where they were now. Here was building urgently needing to be done for the war, to say nothing of afterwards. But the Government, thinking along purely military lines, had too limited a view of the matter.

The Problems of Organisation.

The problem of the organisation of the building industry was, first, to remember that building was a great social service of fundamental importance now and in the future. All branches should have a contribution to make, whether it was on the technical and professional side, the business and managerial side, or the operative side. The Government must be told of the plight of the industry, and the brains of those who lived by it must be employed to formulate a plan which would compel a change in the Government's attitude towards the industry. At present, civil building was progressively closing down, and, so far as replies could be got from responsible people, the Government's attitude of closing down civil building would go still further. At what point should those in the industry call a halt and ask for a reversal of the Government's policy? When they did this their approach to the Government should be to point out that building was a great social service of fundamental importance now and in the future. They should make sure that when Government control was exercised, it was after taking into consideration all facts and factors so as to rationalise it as a great social service.

A second point was that there should not be less Government control but a wiser and more understanding one. Much civil building could be proceeded with if the Government would release the timber it did not require. Here there was a difference between actual demand and conjectural demand; people in high office said they must have a reserve, but there was a big margin that could be released in order to assist civil building. Readily available substitutes might be made for timber. In this connection the architectural profession had offered its wholehearted services; it had asked to know the Government's difficulties so that brains and abilities could be applied to overcome those difficulties. But this helping hand did not appear to be welcome.

A third point was that the essential factors of the industry—operatives, architects, employers, building manufacturers and others—now united in the B.I.N.C., should become more articulate and press forward in the organisation of the industry. These factors should formulate the lines along which organisation should proceed and make necessary adjustments.

Fourthly, in relating the activities of the industry to what war conditions required, the industry should prepare for the future town planning, housing, school building, etc. A vast amount of work was certain to accrue directly the war was over, and the more the future had been planned out the better would the industry be able to play its part.

Need for a Building Adviser.

MR. RICHARD COPPOCK stated that it had rested with the operatives three years ago to approach the Government and discuss the policy to be pursued so far as the building trade was concerned in the rearmament programme. There was no building adviser to the Government. Other industries which were more centralised had great mass organisations, and the representatives of these organisations were in responsible positions in the various Departments controlling the destinies of the nation.

Not long since he and Mr. Hicks had been told that the rearmament plan could not be carried out without an increase of 50,000 or 60,000 employees in the building industry. They had replied that this was not necessary, and events had proved it was not necessary, because, during the early stages of the rearmament programme, not one job was stayed because of lack of building personnel. There was too great a division between the different sections of the industry. They would only make their voices heard when they were a co-ordinated whole, and as such could go to the Government and express their point of view.

MR. R. TOWNSEND (Chairman of the A.A.S.T.A.) voiced the feelings and opinions of some of the more youthful people present. He thought the situation created by the war was an intensification of what occurred in peace time, and advocated the nationalisation of the industry.

Other speakers followed.

GOVERNMENT CONTRACTS

POSITION OF THE SMALLER FIRMS.

THE basis on which Government contracts for building work have been placed has been the subject of correspondence between Mr. W. J. Rendell, managing director of Messrs. F. Rendell and Sons, Ltd., of Devizes, and Sir Percy Hurd, M.P. The latter has been in communication with the War Office, and copies of the reply from Sir Victor Warrender, on behalf of the Minister for War, and Mr. Rendell's comments thereon to Sir Percy, are now appended.

TO SIR PERCY HURD, M.P.

DEAR HURD,—I am writing in reply to your letter of December 4 to Mr. Hore-Belisha with which you enclosed a memorandum from Messrs. F. Rendell and Sons, Ltd., relating to War Office building contracts. I should like to say, first, that the War Office, though circumstances have made it inevitable that many of their larger camp contracts should be placed with certain large contractors, are most keenly alive to the desirability of employing the smaller firms, especially those in the neighbourhood of the jobs. The Commands who send out tenders for the smaller contracts have been instructed to limit their tenderings to firms in the area of the Command, and in the next batch of large camp contracts very special efforts are being made to allow local firms to participate in the work as far as is practicable.

But no firm can be invited to tender for jobs beyond its recorded capacity, which is assessed on the basis of the largest job which it is known to have carried out successfully. Messrs. Rendell, for example, were until recently noted for jobs of £20,000, and the notation was increased to £50,000 in November. This would exclude them from such a job as the camp at ——, to which they refer. They have already been advised to apply to the Chief Engineer of the Southern Command in connection with work within their capacity.

I am especially obliged to Messrs. Rendell for sending the names of some smaller Wiltshire firms, as there are undoubtedly some good firms which have not until the war interested themselves in War Office work, and have not applied for notation on the War Office list.

Yours sincerely,

(Signed) VICTOR WARRENDER.

War Office, S.W.1.
January 12, 1940.

* * *

TO SIR PERCY HURD, M.P.

DEAR SIR PERCY,—I thank you for yours of the 15th January, enclosing Sir Victor Warrender's letter to you in reply to your letter to Mr. Hore-Belisha of December 4.

In the first paragraph Sir Victor Warrender states that "The War Office is keenly alive to the desirability of employing the smaller firms, especially those in the neighbourhood of the jobs." I cannot better illustrate that this is not the case than by sending you herewith two invitations received from the War Office this morning, on the same post as your letter:—

1. Asking us to tender for one single hut at . . . .

2. Asking us to tender for four huts, two each in different parts of the county.

In these days of difficulty of transport, and petrol rationing, it cannot be economical to ask contractors from . . . . to go to . . . . to erect one hut. Surely it would suffice if the local . . . . builders were asked for this.

Our point of view is that . . . important local works have recently been carried out by an outside contractor, for which we were not asked to tender, although in the field immediately adjoining the job we were carrying out a £54,000 job for the County Council, and had our organisation and plant on the spot.

Coming to the second paragraph of Sir Victor's letter, this surely is a very lame story, as, if the War Office have any wish to find out the capabilities of firms in the neighbourhood of work to be done, they have only to apply to the County Architect in each county, who usually knows what each builder in the county is capable of.

To my mind there is a great difference in what a contractor should be capable of doing in carrying out one of these hutted contracts, where the wood huts are supplied ready-made, and only have to be erected (which accounts for a very large proportion of the cost), and carrying out a job for the County Council, where we are responsible for everything on the job.

At the present time outside contractors are coming into our district and trying to entice our men away by paying 3d. an hour over the local rate, in addition to a subsistence allowance of 24s. 6d. a week. Had some of this work been entrusted to outside architects and surveyors, as you suggested, many of whom now have nothing to do, the work would have been carried out much more quickly and economically.

W. J. RENDELL.
Managing Director.
F. Rendell and Sons, Ltd.

OBITUARY

F. E. Eiloart, F.S.I.

We regret to record the death, at the age of 82, of Mr. Frederick Edward Eiloart. Born in 1857, he was the son of the late F. G. Eiloart, surveyor and auctioneer, of 40, Chancery-lane, and after leaving Bruce Castle, Tottenham, where he was educated, he began his professional education with Messrs. Holland & Hannen, the builders. In 1877 he began work in the business of his father, on whose death in February, 1883, he took over the practice. In 1920 he took two of his sons into partnership, one of whom (Mr. F. R. Eiloart) survives him. In 1927 he took into partnership Mr. G. H. N. Inman, A.R.I.B.A., and the firm became Eiloart, Son and Inman.

Mr. F. E. Eiloart became a professional Associate of the Chartered Surveyors' Institution in 1879, and a Fellow in 1883, and a Fellow of the Auctioneers' and Estate Agents' Institute in 1897. He had served on the Auctioneers' Benevolent Society Committee, and was chairman of the North-West branch of the Chartered Surveyors' Institution in the second year of its inception, namely 1922-23. He was Surveyor to the Finsbury, Holborn and Hampstead Licensing Justices, and for the last 16 months had been Chairman of the Central London Throat, Nose and Ear Hospital. In 1922 he was Master of the Worshipful Company of Fruiterers. For many years he took a deep interest in the work of the London Society, of which he had been treasurer. He was attending business in January of this year, up to his last illness.

J. W. S. Burmester, F.R.I.B.A.

The death is announced of Mr. John William Stanley Burmester, F.R.I.B.A., F.S.I. Mr. Burmester, who was 82, was elected F.R.I.B.A. in 1891, and was placed on the retired list in 1930.

Colonel A. V. Rowe.

Colonel A. V. Rowe, Worcester County Architect, whose death at the age of 59 is recorded, was a member of a family that for four generations had practised architecture in the City of Worcester. He succeeded his father as County Architect in 1910, and had designed many buildings in the county. He also held the appointments of Surveyor to the Cathedral and Surveyor to the Worcester Building Society. During the four-years' war he commanded the 8th Battalion of the Worcestershire Regiment.

THE R.I.B.A. AMENDED FORM OF CONTRACT—III

By W. T. CRESWELL, K.C., Hon. A.R.I.B.A., A.S.I., etc., assisted by NORMAN P. GREIG, B.A., Barrister-at-Law.

CLAUSE 19 (Determination by Employer) (see Article IX, September 1, 1939). A proviso is added to sub-clause (c) (4) of the amended Form to the effect that, in the event of determination by the employer as provided by the clause, no expenses incurred by the employer in respect of materials and goods or wages, purchased or paid for at prices or rates in excess of those prices or rates which were current at the date of such determination, are to be chargeable to the contractor under this sub-clause.

[Clause 25 of the Amended Form deals, *inter alia*, with the matter of determination of the contract following upon fluctuation of prices of materials and goods, etc., due to war conditions, and consequently sub-clause (c) of that clause should be read with Clause 19 of the Amended Form.]

Clause 24 (*Certificates and Payments*) (see Article XI, September 15, 1939). The corresponding sub-clause (b) of Clause 24 of the 1939 Form is amended. The certificate to which the contractor is entitled under the clause is now to include only the value of materials and goods intended for the works, as and from such time as they are brought upon the site or stored upon the contractor's premises, for Clause 25 (g) of the Amended Form permits, as has been previously mentioned, such goods and materials to be stored upon the contractor's premises with the previous consent of the architect. But these goods and materials stored upon the contractor's premises may, by the Amended Clause 24, only be included provided they are adequately stored and protected against weather or other casualties [that is, damage] not caused by or in consequence of hostilities or warlike operations. It will obviously be the business of the architect to decide whether these goods and materials are adequately stored and protected against weather or other "casualties," and he would naturally not give his permission for them to be stored on the contractor's premises unless he was assured that they could be adequately stored and protected.

Sub-Contracts.—It will be convenient here to comment briefly upon the position of a nominated sub-contractor. It is provided by Clause 21 of the Amended Form, which reproduces Clause 21 of the 1939 Standard Form (see Article X, September 8, 1939) that a nominated sub-contractor must not be employed who will not enter into a sub-contract in accordance with the provisions of the aforesaid Clause 21. Up to the time of writing there has been no Form of Sub-Contract issued in connection with the 1939 Standard Form of Building Contract; nor, of course, for the Amended Form of that Contract. Generally speaking, it must be remembered that the sub-contractor and main contractor are in the same relationship one to the other as the main contractor and employer are under the main contract. That being the case, the fact that the sub-contractor under the 1939 Standard Form of Contract is obliged to indemnify the contractor against the same obligations in the sub-contract as the contractor is liable

to in respect of the main contract, it need only be stated here that the drawing up of a sub-contract during the period of hostilities (and afterwards) must, as fluctuations in prices of goods and materials as well as rates of wages affect the main contractor and sub-contractor alike, be a matter of no little care. A further matter that might be mentioned here is the difficulty, already apparent, of obtaining goods and materials of the kind described in the bills of quantities, or a continuous supply of the same sort and kind, during the period of war. (See Clause 5 of the Standard 1939 Form, Article III, July 21, 1939.) The position of the architect under that clause is not, therefore, an enviable one.

(To be continued.)

EMERGENCY INQUIRY BUREAU

Questions from readers arising out of War-time difficulties and recent Emergency legislation will be answered by a special staff of contributors. Questions, which should be addressed to the Editor, should be accompanied by a stamped and addressed envelope.

Broken Building Contract.

SIR,—*I am building a block of three houses for a local authority. They were started in July last, being part of a contract of seven houses. At the outbreak of war the other four houses were stopped, and the contract thus broken. There is no war clause in the contract to cover the authority or myself. What claim, if any, can I make?* R.

A correspondent writes as follows:—

Since the contract for the seven houses was entered into before the war commenced, and there is no war risk claim in the contract, then, since four houses have been cut out of the contract, there is a breach of it. The inquirer is therefore entitled to claim such damages from the Council for loss he has actually suffered, such as expenses in connection with materials and profits he would have made therefrom, as also from the work had it proceeded in its entirety. He should seek legal advice as to all this first.

Payment of Nominated Merchant.

SIR,—*Can you inform me whether, under the R.I.B.A. Standard Form of Contract,* 1931, *the builder can make a nominated merchant wait until he (the builder) has received payment, or, say, until* 14 *days from receipt of certificate in which the value of the merchant's goods was included, and still retain the* 5 *per cent. cash discount? Is the merchant entitled to insist on a strict monthly payment (that is, payment not later than one month after delivery of goods) before allowing the* 5 *per cent. discount?* A. R.

A correspondent writes: The builder cannot "make a nominated merchant wait until he has received payment, or, say, until 14 days from receipt of certificate in which the value of the merchant's goods was included."

The merchant is entitled to payment in accordance with the terms made with the builder. If they are monthly terms (the usual terms) the builder must make payment one month after delivery of goods if he wants to be allowed the 5 per cent. discount. There is no privity of contract between the merchant and the builder's employer, nor does the main contract of the builder govern in any way payments or the terms of the contract of the builder with the merchant.

NEWS ITEMS

A Contractor's Estate.

Mr. Charles Frederick Kearley (87), of C. F. Kearley, Ltd., builders and contractors (net personalty £154,405), left £162,419.

Emergency Addresses.

Emergency Services publish from 76, Chancery-lane, W.C.2, "Emergency Addresses Directory"—a classified directory of business houses, professions, etc., now operating from emergency premises. The price is 1s. The Directory will be revised from time to time.

Ministry of Health Loans.

Loans sanctioned by the Ministry of Health during the quarter ended December 31, 1939, to local authorities in England and Wales were as follows:—

Housing, £754,771; municipal services (including clinics, sanatoria and mental hospitals), £323,157; swimming pools, playing fields, recreation grounds, open spaces, etc., £32,935; water supply, £496,717; disposal of waste products (sewerage and sewage disposal and refuse destruction), £195,279; education services (including libraries and museums), £177,875; roads and bridges, £115,206; other services, £2,241,561. Total, £4,337,501.

The English Joinery Manufacturers' Association.

The English Joinery Manufacturers' Association, established in Nottingham in 1904, has recently moved its headquarters to London. It has taken offices at 31, Marsham-street, Westminster, S.W.1 (telephone: Abbey 4297), and Mr. R. G. Harvey Greenham, B.A., LL.B., has accepted the post of secretary. Mr. John T. Sharp, of Messrs. Sharp Bros. & Knight, Ltd., of Burton-on-Trent, who has acted as President for the last twenty years, has now been appointed Past-President, and has been succeeded in the office of President by Mr. Henry N. Newsum, M.C., J.P., managing director of Messrs. H. Newsum Sons & Co., Ltd., of Lincoln. The Vice-Presidents are Mr. R. W. Mugford, of Messrs. Duncan Tucker & Sons (Tottenham), Ltd., and Mr. James B. Austin, of Messrs. Austins of East Ham. Mr. W. E. Adams, J.P., F.C.I.S. (of Messrs. John Sadd and Sons, Ltd.), has been appointed Hon. Treasurer.

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OFFICIAL NOTIFICATIONS

TIMBER CONTROL.

Softwood and hardwood importers and merchants and plywood importers, situated in the United Kingdom, should now apply to the Area Offices of the Timber Control for copies of Form T.C.3/8/Q1—"Application for Trading Quota to deal in 'National Stock' of Timber." The application forms, when completed, are to be returned, marked "Confidential," to the Ministry of Supply, Timber Control Department III, Branch 8, Bristol. Only applications in writing will be considered. Members of the timber trade are advised to apply promptly for the form, so as to give them sufficient time to prepare the necessary information required to complete it. Only applications from importers and merchants will be considered.

GALVANISED SHEETS: PRICES.

The Iron and Steel Control of the Ministry of Supply have issued controlled maximum delivered prices for all quantities of black and galvanised sheets, as well as prices respectively to the building and metal trades and to the public, for under 5 cwt. The full particulars may be obtained from Steel House, London, S.W.1.

NEW BUILDINGS IN LONDON

BETHNAL GREEN. — HOUSING. — The L.C.C. recommend the site forming part of the James-street, now Sceptre-road, area and adjoining site, be sold to the Sutton Dwellings Trust.

DEPTFORD.—STORE. — The plans for a store building at Creekside Depot having now been prepared, the B.C. are inviting tenders for the work.

EAST HAM.—BUILDING.—The C.B. has passed plans for additions at 294/6, Shrewsbury-road. Mr. J. W. Lohden, 19, Plashet-grove, E.6, is the architect, and for an additional floor to the new store at Burgoyne Burbidges, High-street South. Messrs. W. and C. French, Ltd., builders, Buckhurst Hill.

EAST LONDON.—STATIONS.—The L.P.T.B. has placed contracts for the building of new underground stations at Leytonstone and Hainault, two of the key points on the extension of the Central Line eastward from Liverpool-street, with Messrs. L. and W. Whitehead, Ltd., 169, Clapham-road, S.W.9.

KINGSTON.—ADDITIONS.—The T.C. are now inviting tenders for alterations and additions to the electricity works, from plans prepared by the Borough Surveyor.

LEYTON. — BUILDING. — Following plans have been approved by the T.C.:—Additions to factory, 258, Church-road (plans by Mr. A. Whitaker, 16, Fords-grove, N.21); 25 garages adjoining 3, Millicent-road (surveyors, Messrs. S. Charles and Co., 7, Savoy-corner, Lea Bridge-road, E.10); additions to bakery in Harrow-road (plans by Mr. R. J. Coles, 76, Gordon-road, Woodford Green); and alterations at 40, Crownfield-road (plans by Messrs. H. G. Needham and Sons, 139, Earlham-grove, E.7).

MALDEN.—LIBRARY.—The Surrey C.C has approved the proposal that work in connection with the new central library in Kingston-road should be allowed to proceed to completion.

MALDEN.—SHOP.—The T.C. has approved plans for a new shop at 131, Malden-road for Messrs. Montague Burton, Ltd., of Leeds.

TWICKENHAM.—PREMISES.—We are informed by the Eagle Oil and Shipping Co., Ltd., that the work for alterations and additions, 21, Waldegrave-park, referred to in our last issue, has already been carried out.

WIMBLEDON.—BUILDING.—The T.C. has applied to the Electricity Commissioners for sanction to the borrowing £1,250 for the acquisition of the site, the erection and equipment, of the sub-station in the garden of Southside House, The Common, Wimbledon. Plans have been approved by the Corporation for a factory on land on the south side of Riverside-road.

A.R.P. SCHEMES

LONDON.

CAMBERWELL.—B.C. has placed a contract for an A.R.P. cleansing station at the council's depot at Camberwell Green, S.E.5, with F. and C. Costin, Ltd., 226-228, Kenton-road, Kenton, at £3,463.

DARTFORD.—R.D.C. approved plan for Kent C.C. for shelters at various schools: Farningham, Stone, Sutton-at-Hone, Swanley Junction, and Wilmington.

DEPTFORD.—B.C. placed contracts for first-aid posts in Evelyn-street, Pepys-road and at rear of Goldsmiths' College with W. H. Gaze and Sons, Ltd., Kingston; public shelters at Frankham-street, Endwell-road and Vesta-road with V. R. Stotesbury, Evelyn-street, at £903 14s. Drainage plans passed for A. S. Grunspan, 70, Victoria-street, S.W.1, for first-aid post, Goldsmiths' College, Barriedale, and first-aid post at Aske's boys' school, Pepys-road.

HENDON.—B.S. submitted plans and estimates to T.C. for accommodation at auxiliary fire stations, as follows: Station-road garage, Edgware, £495; Mill Hill station, Hartley-avenue, £100; Horrocks garage, East-road, Burnt Oak, £550; Wentworth Hall garage, The Ridgeway, Mill Hill, £385; Government Lymph Establishment, Colindale-avenue, Hendon, £484 10s.; St. Peter's parish hall, Cricklewood-lane, £326 10s.; St. Alban's parish hall, £118 10s. Mill Hill first-aid post to be altered, at £400, to provide separate accommodation for decontamination of men and women. £160 is to be spent on alterations to tea house at Golders Hill Park for use as a first-aid post and ambulance depot. B.E. to arrange for overground shelters at St. Mary's R.C. and Broadfields-avenue temporary schools. Plans passed for shelter, Golders Green Crematorium, Hoop-lane, N.W.11, for London Cremation Co., Ltd. Dove Bros., Ltd., builders.

LAMBETH.—B.C. approved following: Shelters, public streets, £3,501; steelwork for basement shelters, £450, and steelwork for public shelters, wardens' posts, stretcher party depots, etc., £846.

LONDON.—L.C.C. recommend the borrowing by the Hackney B.C. of £7,200 for air raid precautions purposes and the Stepney B.C. £2,086 for the same purpose.

MALDEN.—T.C. to make application to M.H. for borrowing £5,023 for development of old highways depot, cleansing station, mess room, sleeping quarters, etc., and ambulance garages, new mortuary, fire brigade hose tower, etc. Contracts placed as follows for erection and sinking of galvanised corrugated steel shelters: J. L. Eve Construction Co., Ltd., and Aubrey Watson, Ltd.

POTTERS BAR.—S. Worboys and Sons, Ltd., Baker-street, Potters Bar, accepted at £1,450 for U.D.C. cleansing station and works in connection with adaptation of existing building for mess, rest, bunk and garage accommodation at Oakroyd A.R.P. depot, Oakroyd-avenue. Plans by E. Carr, M.Inst.M. and Cy.E., P.A.S.I., E. and S., Wyllyotts Manor, Darkes-lane.

SUTTON AND CHEAM.—T.C. approved shelters for 150 at Municipal Offices, under car park, at £912, and for Manor Park House, at £130; brick shelter, Sydney-road flats, to accommodate 50 persons, at £250; for 150 in Church Hill-road area, on the island in Northfield-crescent, at £675; for 100 persons in vicinity of junction of Gander Green-lane with London-road, at £450. Plans passed for shelter at 341, High-street, Sutton, for P. F. Dickinson (Sutton Creameries).

WOOLWICH.—B.C. recommend following: Communal shelters—Foreland-street, £121 12s.; Sand-street, £106 13s.; Brewery-road, £115; Vincent-road, £84 18s.; Morris-place, £322 1s.; further domestic brick-built shelters, at £210 8s. and £285; shelter at 76, Beresford-street, S.E.18, at £103 10s.; fencing, with sliding gates where necessary, at shelters, at £601 10s.; overground air raid shelters at North Woolwich, at £1,015; land adjoining site of Tower House, Plum-lane, S.E.18, to be acquired and B.C. to demolish existing warden's post and to erect same on new site, at total cost of £1,966; extend cleansing depot at Middle Park-avenue, at £464 10s.; B.E. to carry out protective works at Council's mortuary, Sunbury-street, Woolwich, at £100; domestic shelters at sports ground, rear Meadowcourt-road, at £231 5s.; Wimpey and Co., Ltd., at £176 per shelter, for three shelters; removal of sandbag walling and provision of shutters and hollow brick walling, at town hall and municipal offices, at £160.

PROVINCIAL.

ASHINGTON.—Northumberland C.C. to erect 13 public shelters.

BARNSTAPLE.—W. Norman, Sea Side, Combe Martin, N. Devon, secured contract for excavation of trenches for about 550 ft. at Shackhays, Combe Martin, for R.D.C. Plans by S. P. Smith, water engineer, Castle-street.

BATH.—T.C. recommend St. James' Church Crypt, St. Peter's Church gymnasium, Walcot Closed Burial ground chapel, and city mortuary to be made into temporary mortuaries.

BIRMINGHAM. — E.C. has accepted following tenders: Shelters at schools, neutral area: Marsh Hill open-air, Wm. Wilkinson, Ltd., £598; Bournville Undenominational, St. Peter's R.C., Harborne, and George Dixon Elementary, B. Whitehouse and Sons, Ltd., £1,615, £1,023 and £894; Kingstanding R.C. and St. Mary's R.C., Harborne, J. and W. Malley, Ltd., £790 and £395; Maryvale R.C., T. Elvins and Sons, Ltd., £950; Weoley Castle R.C., Wm. Legg and Co., Ltd., £461 15s.; Hamilton-rd. special, P. W. Cox, Ltd., Grove Land, Handsworth, Birmingham, at £390; protection work at following grammar schools, St. Philip's and King's Norton Girls, J. and W. Malley, Ltd., £247 and £955; George Dixon's boys and girls, B. Whitehouse and Sons, Ltd., £869.

BIRMINGHAM. — Contracts placed for overground brick shelters at various schools for T.C.: (a) 9 at Hawthorn-road; (b) 7 at Dorrington-road; (c) 6 at Turves Green and 2 at Bordesley Green Technical School; (d) 5 at Audley-road; (e) 3 at Ilmington-road. Contractors are: (a) Morris Jacobs and Sons, Ltd., Stechford, £1,086; (b) P. W. Cox, Ltd., Handsworth, £957; (c) C. Bryant and Sons, Ltd., Small Heath, £720 and £289; (d) W. B. and F. T. Archer, Handsworth, £590; and (e) W. Seaton, Harborne, £415.

CHELMSFORD.—T.C. accepted following tenders for above ground shelters in brick and concrete at schools: W. H. C. Heath and Son, Seven Kings, Moulsham senior, £1,165; Moulsham junior, £1,553; Moulsham infants, £679 13s.; Friars, £171 12s.; Springfield, £137 10s.; St. Peters, £122 19s.; and Mr. F. E. Smith, Grays, Kings-rd., £1,926 10s. 62 firms tendered.

CHESTERFIELD.—Contracts placed for: (a) seating; (b) installation of electric lighting in A.R.P. school trenches for T.C. Wilcockson and Cutts, architects, Saltergate. Contractors are: (a) Curtis and Sons, Ltd., Leeds, 9, at £345, and (b) W. H. Burton, Chesterfield, £597.

CONNAH'S QUAY.—U.D.C. propose decontamination centre adjoining Old Clay Hole, High-street, and public shelter adjoining Council Offices.

CORBY.—U.D.C. propose public shelters, at £1,600.

ESSEX.—C.C. approved following A.R.P. work: Adaptations at St. Mary's schools, Clacton, at £389; erection at Fairycroft of cleansing station, at £466, and vehicle cleansing shed, at £170; huts for messing and sleeping accommodation at St. Chad's Depot, at £436; trenches at Oldchurch County Hospital, Romford, at £1,976, and adaptation of first-aid post at church hall, Chingford, at £328.

ESTON.—Home Office approved U.D.C.'s plans for public shelters, at £7,706.

FAILSWORTH.—U.D.C. to invite tenders for domestic shelters.

GRIMSBY. — T.C. propose additional shelters at public elementary schools, at £6,485.

NEWCASTLE-ON-TYNE. — City Council received M.H. consent to borrow £32,000 for expenditure on street trenches, Victoria Tunnel shelter, park trenches and basements.

OSSETT.—M.H. sanctioned T.C. spending £3,598 on shelters.

SHIPLEY.—Air raid shelters at elementary schools will cost £10,658, and permission to borrow the sum is being sought by E.C.

SOUTH SHIELDS.—T.C. to construct shelter for 200 people at Scala Theatre. John Reid, B.E.

STAFFORDSHIRE. — C.C. recommend sanction to supplementary estimates of £21,000 and £7,000 for shelters for elementary and secondary and technical schools.

SUNDERLAND.—Direct labour to be employed for shelters at Prospect-row junior instruction centre and colliery school centre for E.C. O. Hall Mark, architect, Education Offices. Cost, £1,200.

SWINTON.—Frank Davies, 213, Manchester-road, Clifton, Manchester, contractor for sinking and erection of approximately 4,500 Anderson shelters for T.C. A. Cordwell, B.E. and S.

SCOTLAND.

AYR.—Plans to be prepared for shelters at £2,600 for six schools; the architect is Mr. W. Reid, Wellington-chambers, Wellington-square.

BO'NESS.—Corporation decided to build decontamination control centre at Links-street site from plans by Burgh Architect and Surveyor, W. Beattie.

DUMBARTONSHIRE.—E.C. received permission from Scottish Education Department to erect shelters at four schools in Clydebank.

GLASGOW.—Following shelters to be erected: At block of offices, West Regent-street and Regent-lane, F. A. MacDonald and Partners, 139, Wellington-street, Blythswood, architects, J. Campbell, Glasgow, contractor; Abbotsford public school, Whyte and Nicol, 121, Bath-street, Blythswood, architects; Rosemount public school, John MacKissack and Son, 65, Renfield-street, architects; St. Paul's school, James B. Wilson, Son and Honeyman, 96, Bath-street, Blythswood, architects; Thurson-street public school, James Taylor Thomson and Partner, 212, Bath-street, Blythswood, architects; Oakbank public school, Will J. B. Wright and Kirkwood, Carlton House, Blythswood, architects; St. Saviour's Catholic school, Robert Walker, Hardie and Smith, Blythswood-square, architects; St. Patrick's boys' school, S. Buntain, 237, Bath-street, architect; Victoria-drive public school, William Baillie and Son, The Accountancy Hall, West Regent-street, architects; at 249, West George-street, Blythswood-square, Alister Sutherland, 420, Sauchiehall-street, architect, R. Rogerson and Co., Ltd., Scotstoun, contractors; St. Anthony's Catholic school, Walker, Hardie and Smith, architects, M. Simpson and Co., Ltd., Glasgow, contractors; at warehouse of Gardner, Ltd., Jamaica-street and Orr-place, T. Cordiner, Blythswood-chambers, West George-street, architect, J. Howie, Glasgow, contractor; at Central Station-buildings, Union-street, Watson, Salmond and Gray, 111, Union-street, architects, J. MacGlashan and Son, Bridgeton, contractors.

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NEW CINEMAS

DUNDEE.—The T.C. have approved alterations to a cinema in Victoria-road for J. B. Milne Theatres. The architect is Mr. W. M. Wilson, 61, Meadowside, Dundee.

STOURBRIDGE.—The directors of the Danilo Cinema in Hagley-road propose to complete the erection of the cinema. The architect is Mr. E. S. Roberts, L.R.I.B.A., Great Charles-street, Birmingham, and the contractors are Messrs. William Jackson (Langley Green), Ltd., Langley Green.

CONTRACTS OPEN

For some contracts still open, but not included in this list, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender, that a fair wages clause shall be observed, that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender, unless stated to the contrary. The dates at the head of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained. Abbreviations: (A.) for A.R.I.B.A.; B. of E. for Board of Education; B.C. for Borough Council; B.E. for Borough Engineer; B.S. for Borough Surveyor; C. for Clerk; C.B. for County Borough; C.C. for County Council; C.E. for County Engineer; C.S. for County Surveyor; D.S. for District Surveyor; E. for Engineer; E.C. for Education Committee; (F.) for F.R.I.B.A.; (L.) for L.R.I.B.A.; M.W.B. for Metropolitan Water Board; M.H. for Ministry of Health; M.T. for Ministry of Transport; P.C. for Parish Council; R.D.C. for Rural District Council; S. for Surveyor; T.C. for Town Clerk and Town Council; and U.D.C. for Urban District Council.

BUILDING.

FEBRUARY 10.

Antrim.—Filter-house at waterworks of County Antrim Mental Hospital, near Antrim, for Committee. F. D. Brown and Sons, engineering consultants, Bank of Ireland-chambs., Queen's Bridge, Belfast. Dep. £2.

Bilston E.C.—Six trench shelters and four surface shelters at Etheridge schools. A. F. B. Sidwick. B.E.

Feltham U.D.C. — Domestic surface shelters. E. and S. Dep. £2 2s.

Littleborough U.D.C.—Conversion of shed at Hare Hill into garage. G. F. Wild, E. and S.

Middlesbrough C.B.—Conversion of blocks "A" and "B" to nurses' bed and sitting rooms at Hemlington hospital. C. Gorman, B.E., Architect and S. Dep. £1 1s.

Middlesbrough C.B.—Alterations to dairy and farm buildings, St. Luke's mental hospital. C. Gorman, B.E., Architect and S. Dep. £1 1s.

Walsingham R.D.C.—34 houses, Field Dalling, Little Ryburgh, Morston, South Raynham and Wighton. J. Bamford, Housing Officer, Fakenham. Dep. £2 2s.

FEBRUARY 12.

Bury T.C.—Wiring of A.R.P. trenches. J. G. Potts, engineer and manager, Electricity Dept., Market-st.

Chepping Wycombe E.C.—A.R.P. shelter-trenches, lined with precast concrete sections, at Gordon-rd. school. J. A. Parkinson, B.S., High Wycombe.

Edinburgh T.C.—Messing buildings and stores at Powderhall refuse disposal works; Gilmerton-rd., Nether Liberton; Bruntsfield House grounds; and Balcarres-st. cleansing dept. depot. City E., 329, High-st.

Loughborough T.C.—Brick and concrete surface-type shelters, each for 50 persons. W. Granger, B.S. Dep. £1 1s.

Shipley U.D.C.—Strengthening, by means of steel girders and struts, of approximately 1,200 basements. H. Dawson, Surveyor and Architect, Town Hall.

FEBRUARY 13.

Grimsby C.B.—Alterations to St. Peter's Presbytery, Watkin-st., for its future use as Remand Home. J. V. Oldfield, B.E. and S. Dep. £2.

***Kingston T.C.**—Additions and alterations to electricity works. B.S.

Wellingborough R.D.C. — Fire brigade station, School-rd., Irchester. H. W. Sheffield, S., 18, Oxford-st.

FEBRUARY 14.

Birmingham T.C.—Laboratories at Saltley and Windsor-st. gas works. A. W. Smith, General Manager and Secretary, Gas. Dept. Dep. £2.

Crosby T.C.—Cleansing station at Corporation storeyard, College-rd. J. R. Fothergill, B.E. and S. Dep. £1 1s.

Dundee T.C.—Steelwork, etc., extensions to generating station, Carolina Port. D. H. Bishop, general manager and engineer, Electricity Dept., Dudhope Crescent-rd.

Hornsey T.C.—Surface shelters. J. H. Melville Richards, B.E. and S., Town Hall, N.8. Dep. £2.

Margate T.C.—Brick air raid shelter, Setterfield-rd. B.E., 40, Grosvenor-pl.

Sutton and Cheam T.C.—Sinking, erection and concreting 150 and 500 Anderson steel shelters. N. H. Michell, B.E. and S. Dep. £2 2s.

FEBRUARY 15.

Caterham and Warlingham U.D.C.—Excavating for and erecting about 30 small surface shelters. S.

Cheshire C.C.—Completion of partially erected proposed senior mixed council school; fencing to boundaries of site, Frodsham senior council school. F. Anstead Browne (F.), County Architect, The Castle, Chester. Dep. £2 2s.

Coventry T.C.—Electricity sub-station, Banner-la, Tile Hill. D. E. E. Gibson (A.), City Architect, 1a, Warwick-row. Dep. £2 2s.

Liverpool T.C.—Canteen accommodation, Edge-la. tram sheds. City Architect and Director of Housing, Rose-la. school, Mather-av. Dep. £2 2s.

Potters Bar U.D.C.—Fire and ambulance station, Mutton-la. Marshall and Tweedy (FF.), 41b, Chagford-st., N.W.1. Dep. £1 1s.

Rochdale C.B.—Shelters in Parish Church schools; Baillie-st. schools; Fleece-st. schools; St. Alban's school. B.S.

Whiston R.D.C.—55 single and 24 dual domestic surface shelters for 111 houses at or near Eccleston-la. Ends; also erection of 15 single and 8 dual domestic surface shelters for 31 houses at or near The Roundabout, Cronton. Watson Garbutt, E. and S.

Whiston R.D.C.—Work in connection with erection of approximately 4,000 Anderson steel shelters. Watson Garbutt, E. and S.

FEBRUARY 16.

Haverfordwest R.D.C.—Two pairs of non-parlour-type houses at Folly, Camrose. W. V. Evans, C., 7, Dew-st.

H.M.O.W.—Telephone repeater station, Old Boston, Lancs. Contracts Section, H.M.O.W., Marine Hydro, Rhyl. Dep. £1.

Lancaster.—Alterations and additions to Station Hotel, Caton, for Exors. of Wm. Mitchell. Reg. W. Jackson, chartered architect, 43, Church-st., Lancaster.

Prestwich T.C.—Alteration and adaptation of existing out-buildings as mortuary at Brooklands, Bury Old-rd. B.E. and S. Dep. £1 1s.

FEBRUARY 17.

Batley T.C.—14 domestic surface shelters in Dale-st., Albert-st. and Victoria-st., Batley Carr. B.E., Brunswick-st.

Cardiff T.C.—Sub-station, together with sub-structure under, and concrete approach road, near Sanatorium-rd. G. H. Whitaker, City Architect.

FEBRUARY 19.

Dublin Corporation.—253 houses with estate office annexe and children's playground at Cabra West housing area. H. G. Simms (A.), Housing Architect, 5, Wellington Quay. Dep. £5 5s.

Kildare Board of Health and Public Assistance.—Doctor's residence and dispensary at Kilcullen, Co. Kildare. Vincent Kelly (F.), 87, Merrion-sq., Dublin. Dep. £4 4s.

Kildare Board of Health and Public Assistance.—Doctor's residence and dispensary at Celbridge. Vincent Kelly (F.), 87, Merrion-sq., Dublin. Dep. £4 4s.

Macclesfield T.C.—Contracts Nos. 4 and 8 for pumping station and filtration buildings. Herbert Lapworth and Partners, engineers, 25, Victoria-st., Westminster, S.W.1, in collaboration with Max Tetlow (A.), Borough Architect. Dep. £2 each contract.

***Rainhill.**—Dispensary at County Mental Hospital, Rainhill, Lancashire. Richard Owens and Son, architects, 3, Crosshall-st., Liverpool, 1.

FEBRUARY 20.

***Merton and Morden U.D.C.**—Nine brick surface shelters for 1,350 persons. E. and S. Dep. £1.

Sheffield T.C.—Piggeries at Longley Hall Farm. W. Geo. Davies (F.), City Architect. Dep. £2.

Wellingborough U.D.C.—Excavation and erection of six shelters, each of a capacity of 50 persons. R. Kilby, E. and S.

FEBRUARY 21.

Ashton-under-Lyne T.C.—Rebuilding of slipper baths at public baths, Henry-sq. Matley, Brotherton and Mills, architects, 39, Oxford-rd., Manchester. Dep. £1 1s.

Chepping Wycombe T.C.—Three surface type shelters. J. A. Parkinson, B.S.

FEBRUARY 22.

Chatham T.C.—Demolition of premises at Watling-st. R. L. Honey, B.E. and S.

FEBRUARY 23.

***Erith T.C.**—Surface and trench shelters, at various schools. J. H. Clayton, B.E. and S. Dep. £1 1s.

Sunderland.—Design and construction R.C. water tower. T.C., Town Hall. Dep. £2.

FEBRUARY 24.

Hayes and Harlington U.D.C.—Fixing and waterproofing of Government steel garden shelters. E. and S.

Merionethshire C.C.—Constable's house at Glyndyfrdwy. N. L. Jones, County Architect, Dolgelley. Dep. £3 3s.

St. Austell U.D.C.—Block of public conveniences, North Quay, Mevagissey. E. D. Groves, E. and S.

MARCH 6.

Deptford.—A.R.P. store building. B.E. and S., Town Hall, S.E.14.

NO DATE.

South-East Essex Joint Hospital Board.—Concrete surface shelter at Billericay isolation hospital. J. J. R. Day, C., Council Offices, Brentwood.

PAINTING, ELECTRIC LIGHTING, HEATING, &c.

FEBRUARY 10.

Benfleet U.D.C.—Internal decorations to seven houses, six in Fowles-av., Thundersley, and one in Rochford-ter., South Benfleet. S. Dep. £1 1s.

†**Montgomeryshire E.C.**—Renovations to caretaker's cottage at Banw, Garthbeibio, senior school. County Architect, Newtown.

Orpington U.D.C.—Repairs and internal redecoration of council houses. L. O. Wall.

Plymouth. — Reinstatement of wooden floors, etc., damaged by fire at premises of Service and Co., Ltd., The Octagon, Plymouth. J. Leighton Fouracre (F.), Lloyds Bank-chambs., Bank-st. Dep. £1 1s.

West Riding E.C.—Improvements to main water service, Bentley Kirkby-av. junior mixed school; improvement of offices at Adwick-le-Street Carcroft Park-la. junior girls' and infants' school; improvements to playground at the Barnby Don junior mixed and infants' school. A. J. Dempster, divisional clerk, Winchester House, Scot-la., Doncaster.

FEBRUARY 12.

Billinge and Winstanley U.D.C.—Painting and decoration of 22 houses, Holt-cres., and 24 houses, The Avenue, Tracks-la. S.

Leeds T.C.—External painting 6,068 dwellings on various estates. R. A. H. Livett, A.R.I.B.A., Housing Director, 26, Great George-st. Charge 5s.

Portsmouth T.C.—Installation of fire alarm system at St. Mary's Hospital. City Architect, Northern Secondary School, Mayfield-rd. Dep. £1 1s.

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West Riding C.C.—Relaying of classroom floors at Bentley New Village Council school. A. J. Dempster, divisional clerk, Winchester House, Scot-la., Doncaster.

FEBRUARY 14.

Merton U.D.C.—Approximately 1,360 yds. of chestnut fencing for temporary allotments at various sites. C. J. Mountifield, Clerk, Dorset Hall, Kingston-rd., Merton, S.W.19.

West Riding C.C.—Clayton institution—new floors to bakehouse; Grenoside institution—renewal of redwood floors in hospital; Tadcaster institution—provision of two bathrooms; County hospital, Keighley—renewal of sanitary fittings. Acting West Riding Architect, County Hall, Wakefield.

FEBRUARY 16.

M.W.B. — Pipelaying, alterations and bricklayers' work within Western, Central and Eastern, Kent and Southern areas, for period of 12 months commencing April 1. Chief E., Rosebery-av., E.C.1.

Teddington (H.M.O.W.).—Installation of heating and hot-water services at Admiralty research laboratory. Room 71, Ground Floor, H.M.O.W., London, S.W.1. Dep. £1.

West Riding E.C.—Repairs and improvements at Cowling school. E. B. Nelson, Education Office, Bingley.

FEBRUARY 17.

Leeds T.C.—Interior painting at St. James hospital, Beckett-st., Leeds, and St. George's infirmary, Wood-la., Rothwell. J. Johnstone Jervis, Medical Officer of Health, 12, Market-bldgs., Vicar-la.

Sheffield T.C.—Installation of electric lighting at Hatfield House-la. senior school. W. Geo. Davies (F.), City Architect. Dep. £2.

FEBRUARY 19.

Newport (I.W.).—Painting, etc., interior of cubicle block at Isolation Hospital, Fairlee, Newport, for Isle of Wight Joint Hospital Board. H. E. Stratton, C., 31, Pyle-st.

FEBRUARY 22.

Stratford-on-Avon R.D.C.—General repairs and improvements to 12 houses, Church-rd., Ullenhall. H. J. Weeks, S., 11, Guild-st.

FEBRUARY 26.

Battersea.—Low-pressure hot-water installation, at Kirtling-st., Battersea, for M.W.B. Chief E. Dep. £1 1s.

MATERIALS, &c.

The materials for which tenders are invited normally include one or several of the following :—asphalt, bricks, brooms, building lime, cast-iron pipes, cement, stoneware pipes, granite chippings, granite kerbs, gravel, gulleys, lime, manhole covers, painters' materials, plumbers' materials, road stone, slates, sand, stone, tar, tarslag and bituminous macadam, timber, and whinstone screenings. Readers should obtain full particulars by personal inquiry.

FEBRUARY 10.

Clitheroe R.D.C.—T. P. Rushton, C.
Cornwall C.C.—C.S., Truro.
Liskeard T.C.—E. J. Hoar, B.S., Public Library-bldgs.
Littleborough U.D.C.—G. F. Wild, E. and S.
Solihull U.D.C.—C. R. Hutchinson, E. and S.
Southend C.B.—R. G. Baxter, B.E.
Wardle U.D.C.—T. H. Harvey, C.
York T.C.—C. J. Minter, City E.

FEBRUARY 12.

Bridlington T.C.—B.E. and S.
Crosby T.C.—J. R. Fothergill, B.E. and S.
Eastbourne C.B.—B.E.
Hornchurch U.D.C.—S.
Ilkeston T.C.—A. O. Marshall, B.S.
Newmarket U.D.C.—W. H. Eley, E. and S.
North Riding C.C.—R. Sawtell, C.S., Northallerton.
Peterborough T.C.—City E. and S.
Robertson Municipality.—Pipes, valves and fittings, together with necessary jointing material. T.C., Municipality of Robertson, Cape Province, South Africa. Dept. of Overseas Trade. (Ref. T. 15459/40.)
Rochdale C.B.—General Manager, Passenger Transport Offices, Mellor-st.
Swadlincote U.D.C.—G. S. Baker. E. and S.
Watford T.C.—W. W. Newman, B.E.

FEBRUARY 13.

Cheshunt U.D.C.—A. Burton Stibbon, E. and S.
Holborn B.C.—J. E. Parr, B.E. and S.
Oswaldtwistle U.D.C.—S.
Rotherham R.D.C.—A. E. Lant, E. and S.

FEBRUARY 14.

Battersea B.C.—Electricity Dept. H. F. G. Thompson, general manager, 204, Lavender Hill, S.W.11.
Chadderton U.D.C.—F. W. Pexton, E. and S.
Greenwich B.C.—B.E.
Heston and Isleworth T.C.—O. P. F. Hilton, B.E.
†**Heywood T.C.**—A. Middleton, B.S.
Northumberland C.C.—Alex Cheyne, C.S., Morpeth.
Swansea T.C.—Water E.
†**Wolverhampton C.B.**—H. B. Robinson, B.E.

FEBRUARY 15.

Chatham T.C.—R. L. Honey, B.E. and S.
Keighley T.C.—R. C. Gibson, B.E. and S.
Padiham U.D.C.—W. R. C. Houston, S. and Water E.
St. Austell U.D.C.—E. D. Groves, E. and S.

FEBRUARY 16.

Chertsey U.D.C.—W. V. Davies, E. and S.
East Riding C.C.—C.S., Beverley.
Gellygaer U.D.C.—J. Evans, C.
Lancaster T.C.—F. Hill, City E.
Leeds T.C.—F. Nicholls, City Electrical E., 1, Whitehall-rd
Lincolnshire (Lindsey) C.C.—A. G. Bradshaw, C.S., Lincoln.
Tottenham T.C.—E. Townson, T.C.
Worcester T.C.—C. I. Carey Walker, City S.

FEBRUARY 17.

Beds C.C.—C.S., Bedford.
Belper U.D.C.—W. H. Wheeldon, S.
East Suffolk C.C.—C.S., Ipswich.
Failsworth U.D.C.—J. Holmes, E. and S.
Goole R.D.C.—S., 7, Belgravia.
Irlam U.D.C.—E. and S.
Kidderminster T.C.—J. Hawcroft, B.E. and S.
Orpington U.D.C.—T. Watson, E. and S.
Thornton Cleveleys U.D.C.—H. Fenton, S.
Westmorland C.C.—H. B. Greenwood, C., Kendal.

FEBRUARY 19.

Carmarthenshire C.C.—T. W. Wishlade, C.S., Carmarthen.
Chigwell U.D.C.—G. Holbourn, E. and S.
Dagenham T.C.—F. C. Lloyd, B.E. and S.
Port Talbot T.C.—B.S.
Staines U.D.C.—D. C. Fidler, E. and S.
Thorne R.D.C.—H. Plewes, S.

FEBRUARY 20.

Hull T.C.—General Manager, Electricity Dept., Ferensway, Hull.
Selby R.D.C.—R. F. Braithwaite, S.

FEBRUARY 21.

Bolsover U.D.C.—W. Veevers, C.

FEBRUARY 22.

Staffs C.C.—R. S. Murt, C.S., Stafford.

FEBRUARY 23.

Nottingham T.C.—R. M. Finch, City E. and S.

FEBRUARY 24.

Burnley R.D.C.—F. Hewitt, S., 22, Nicholas-st.
Crompton U.D.C.—F. T. Jones, E. and S.
Frimley and Camberley U.D.C.—E. and S.
Turton U.D.C.—S.

FEBRUARY 26.

Rutland C.C.—For northern and southern areas (two contracts), R. C. Dalton, C., Oakham.

FEBRUARY 29.

Rhondda U.D.C.—E. Taylor, E. and S.

MARCH 2.

Leek U.D.C.—J. A. Gilchrist, S.

ENGINEERING, IRON AND STEEL.

FEBRUARY 12.

Macclesfield T.C.—Two mass concrete reservoirs. Herbert Lapworth and Partners, engineers, 25, Victoria-st., Westminster, S.W.1. Dep. £3.
Margate T.C.—Steel reinforcement to new pumping station, Foreness Point. W. L. Armstrong, B.E., 40, Grosvenor-pl.
North Riding C.C.—Material for two new bridges to be constructed over Milby Cut on trunk road, immediately north of Boroughbridge. R. Sawtell, C.S., Northallerton.
South African Railways and Harbours Administration.—Steel bars, etc. Sec., Tender Board, Room 420, Johannesburg. (Ref. T. 30206/39.)

FEBRUARY 15.

Heston and Isleworth T.C.—Supply and fixing on prepared foundations of steelwork and corrugated iron required for waste paper store at Staines-rd, Hounslow. B.E. Dep. £1 1s.

FEBRUARY 21.

Milford Haven U.D.C.—Raising concrete dam at Prescelly reservoir. H. B. Ward, Consulting E., 68, The Albany, Old Hall-st., Liverpool, 3. Dep. £3 3s.

FEBRUARY 22.

South African Railways and Harbours Administration.—Pressed steel tank. Dept. of Overseas Trade. (Ref. T. 15058/40.)

FEBRUARY 23.

Aberayron R.D.C.—Supplying, laying and jointing approximately seven miles of spun cast-iron pipes with various specials, together with the construction of concrete service reservoir. J. Owen Parry and Lewis, consulting engineers, Ammanford.

FEBRUARY 29.

South African Railways and Harbours Administration.—Pressed steel tank. Chief Stores Superintendent, South African Railways and Harbours Offices, Rissik-st., Johannesburg. Dept. of Overseas Trade. (Ref. T. 15473/40.)

MARCH 4.

South Africa.—Steel bridgework, etc., for African Railways and Harbours Administration. Sec. to Tender Board, Room 420, Headquarters, Johannesburg. (Local representation is essential). Ref. T. 15066/40.

MARCH 5.

Egypt. — Supply and installation of artesian wells, etc., at Bouch Waterworks Station, for Municipalities Department of Ministry of Public Health. Dept. of Overseas Trade, St. George-st., S.W.1. (Ref. T. 15041/40.)

MARCH 11.

Edmonton T.C.—Footbridge over L. and N.E. Rly. (Cheshunt branch), near Galliard estate. E. J. Willis, B.E. and S. Dep. £2.

ROAD, SEWERAGE AND WATER WORKS.

FEBRUARY 10.

Amersham P.C.—Laying out "King George's Field" and providing equipment for children's playground at Woodside-rd. G. Pratt, C., Bank-bldgs., Whielden Corner. Dep. £1 1s.
Higham and Hundred of Hoo Water Co.—Trench work, etc., to connection with laying of about 6¼ miles of mains in parishes of Stoke and Isle of Grain, Kent. E. Webb, Sec., Bridge-chambs., Rochester.

FEBRUARY 12.

Chichester T.C.—New water supply scheme, pumping main, etc., contract No. 3. Sandford, Fawcett and Partners, consulting engineers, 53, Victoria-st., Westminster, S.W.1. Dep. £5 5s.
Colwyn Bay T.C.—Making-up Kenelm-rd., Rhos (Ebberston-rd. east to Whitehall-rd.). N. S. Jeffrey, Acting B.E.
Eastbourne C.B.—Making-up passage at rear of avenue between St. Leonards-rd. and St. Annes-rd. B.E., 4, Saffrons-rd.
Enniskillen R.D.C. — Road maintenance works in locality of Ballinamallard, Clabby, Lisbellaw and Tempo. J. Brown, C.
Ilford T.C.—Making-up and surfacing of passageway from Cantley-gdns to Springfield-dr., and culvert over Cran Brook. B.E. and S. Dep. £2 2s.
Runcorn R.D.C.—230 yds. of stoneware pipes, 12 in. in dia., with manholes and appurtenant works, at Helsby sewage disposal works. A. J. King, E. and S., Castle Park, Frodsham. Dep. £1 1s.

FEBRUARY 13.

Guildford T.C.—Reconstruction of section of Ryde's Hill-rd., between Shepherds-la. and Chittys Common. H. S. L. Knight, B.E. Dep. £2 2s.
Leyton T.C.—Removal of tramway track and resurfacing of same, together with contingent works, in High-rd., Leytonstone, E.11. B.E. and S. Dep. £2.

FEBRUARY 14.

Barnet U.D.C. — Asphalt patching, St. Albans-rd. and High-st. S.
Stoke-on-Trent T.C.—Making-up various streets. City S. Dep. £1.
Wing R.D.C.—Installation of main water supply services to Council houses at Marsworth, Northall, Pitstone and Slapton. S.

FEBRUARY 17.

Manchester T.C. — Sewering, draining, paving Langley-rd., Rusholme. Highways Department (District Surveyor's Office), Town Hall. Dep. £1 1s.
Westmorland C.C.—Spraying with tar and bitumen 1,500,000 sq. yds. of county roads. A. S. Glover, C.S., Kendal.

FEBRUARY 15.

Brighton, Hove and Worthing Joint Municipal Airport Committee.—950 yds. lin. reinforced concrete carriageway, and approximately 1,500 yds. lin. 36-in. dia. concrete tube surface water sewer at airport, Shoreham. P. E. Harvey, Hon. S. to Committee, Town Hall, Worthing. Dep. £1 1s.

Castlederg R.D.C.—Road maintenance and other works. District Clerk.

Luton T.C.—Combined sewer in Eaton Green-rd. for about 750 yds. F. Oliver, B.E. and S. Dep. £2 2s.

Wenlock T.C.—Contract No. 2 for Harrington waterworks. A. H. S. Waters, E., 25, Temple-row, Birmingham, 2. Dep. £3 3s.

FEBRUARY 22.

Winchester T.C.—Sewer connections, Bereweeke-av. and Uplands-rd. City E.

FEBRUARY 23.

Godalming T.C.—740 yds. of new water mains. E. G. Bowyer, Waterworks E., 35, Bridge-st. Dep. £2 2s.

Peeblesshire C.C.—Providing and laying 2-in. asbestos pipes, constructing tanks, providing and laying 6-in. fireclay pipes and constructing septic tank with relative works. J. and A. Leslie and Reid, engineers, 72a, George-st., Edinburgh. Dep. £1.

MARCH 6.

Durham C.C.—Making-up South View (back), Windlestone. W. J. Merrett, C.E. and S., 43, Old Elvet, Durham.

Public Appointments.

FEBRUARY 12.

Derby.—Builders' manager, Building and Maintenance Dept. Town Clerk, Market-pl.

FEBRUARY 13.

***West Bromwich C.B.**—Architectural Assistants for A.R.P. shelters. J. G. Jeffeson, B.E. and S.

FEBRUARY 19.

Croydon C.B.—Indoor Assistant Maintenance Section, Valuer's Dept. E. Taberner, T.C., Town Hall.

NO DATE.

***H.M.O.W.**—Chief Travelling Timekeeper for service on various large sites. Chief Architect (B.1.), Room 65a, Third Floor, H.M.O.W., London, S.W.1.

CURRENT AND PROPOSED BUILDING WORK*

Bath.—City E., to carry out work at hospital, at £140.—T.C. recommend tenders be obtained for reconstruction of drainage system at Three Ways Homes.

Birmingham.—Mitchells and Butlers, Ltd., Cape Hill Brewery, Smethwick, propose licensed premises, Firs estate, Castle Bromwich.—Ansells' Brewery, Ltd., Aston, Birmingham, propose licensed premises, Bromford-la., Bromford, and at Mackadown-la., Lea Hall.

Bridgefoot.—Nestlé Milk Products, Ltd., it is announced, are contemplating building factory.

Chester-le-Street.—Joint Hospital Board proposes laundry at isolation hospital and representations are to be made to M.H. Architect, E. M. Lawson, Barras Bridge, Newcastle-on-Tyne.

Cofton Hackett.—Ansells Brewery Co., Ltd., Aston, Birmingham, to apply to Licensing Justices for licence for proposed new premises, corner of Groveley-la. and Groveley-la.

Cork.—Cork Milling Co. to extend mill, at £50,000.

Coventry.—Watch Committee proposes alterations to Holmesdale-rd. police station by direct labour.—Managers of St. Edward's junior and infants' R.C. school, Coleshill, seeking sanction of B. of E. to proceed with proposed extensions to buildings.—Salvation Army authorities, 101, Queen Victoria-st., London, E.C.4, proposed Citadel, Spons-st. Plans in Property Dept., London.

Crewe.—Crewe Alexandra Football Club members propose construction sports stadium, including greyhound racing track.

Dublin.—Scheme for flats in congested areas being undertaken by Corporation : 144 flats in Newfoundland-st., 128 in Railway-st., 501 at Crumlin North, 500 at West Cabra, 62 at Emmet-rd., and 16 at Cook-st. Corporation applied for loan of £750,000 for scheme.—Iveagh Trust also undertaking big flat-building scheme on cleared area. Fifteen blocks to be built.

East Riding.—E.C. to carry out improvements to Ellerton Priory Church of England school at £500.

Gateshead.—Contract to be placed in near future for premises in Hawks-rd., for Northern Butchers Hide and Skin Co., Ltd., Shear Legs-rd. Architects, Arthur and Kirkup, 13, Swinburne-st.

Hendon.—T.C. approved : Changing-room, Chase Lodge, Page-st., Mill Hill. Haberdashers Aske's School, per Gordon Carrington Co., Ltd.

Heywood.—T.C. proposes 240 houses, Gooden Farm site. A. Middleton, B.E. and S.

Kensington.—B.C. approved iron railings at Northolt playing field, at £113.

Lancashire.—C.C. proposes to proceed with Forest Mill bridge, at £37,745, and construction of Walton Bridge, Walton-le-Dale, at £42,500; to proceed with Howick Cross to Longton by-pass; construction of Southport-Tarleton - Longditch - Tarleton by-pass, at £103,927; Southport - Tarleton - Longditch-Gravel-la., at £64,458; Great Eccleston by-pass, at £38,649; extension of Euxton-la. to Chorley Boundary, £37,456; reconstruction of Rushbed Bridge, Rawtenstall, at £15,186. P. Schofield, C. S., Preston.

Leek.—Staffs County Committee for Mental Defectives received sanction to proceed with admission hospital and villas as extensions to Cheddleton Mental Hospital, at £22,778. K. L. Murray, F.R.I.B.A., County Architect, Stafford.

4-443A

Leyton.—B.E. and S. to proceed immediately with fencing of several allotment sites with chestnut fencing, at £287 10s

Liverpool.—T.C. recommend extensions to the dispensary, Belmont-rd. institution, £900, and proposed sewers and sewage pumping station at Lowndes Farm, East Lancashire-rd., at £96,049.—M.H. sanctioned borrowing of £12,232 and £4,568 in connection with erection of factories at Edwards-la., Speke, and Stopgate-la., Fazakerley.—Corporation recommend installation of additional electric mains in municipal buildings, at £519.

London.—Miners' Welfare Commission, Romney House, Tufton-st., London, S.W.1, announce that building tenders about to be invited for pithead baths at following collieries :—Gartshore 1, 3 and 12 (Lanarks) for 720 men; Polquhairn (Ayrshire) for 250; Ashington (Northumberland) for 1,728; Coppice (Derbyshire) for 1,728; Annesley (Notts) for 1,056.

London.—L.C.C. recommend borrowing by Islington B.C. of £7,750 for housing, and Kensington B.C. of £13,000, for housing.—Council accepted tender for construction of a pedestrian subway under Southern railway between Dulwich and St. Francis hospitals. Cost, £6,160.

Manchester.—Rivers Mersey and Irwell Catchment Board propose reinforced concrete retaining wall and road bridge, River Irk, at Collyhurst.

Manchester.—T.C. recommend £140 for works at Heaton Hall.—Parks and Cemeteries Committee recommend culverting brook, etc., Hollyhedge-rd., £1,100.

Merton and Morden.—U.D.C. approved : Saw mill rear of factory near boundary of Sutton Water Co.'s land, for Lines Bros., Ltd., Morden-rd.

Much Wenlock (Salop).—R. G. Murphy, Brooklands, Wellington-rd., proposes erection of "Severn House" hotel, Buildwas-rd., Coalbrookdale.

Newport (Salop).—W. Butler and Co., Ltd., Springfield Brewery, Wolverhampton, proposes public-house, Wellington-Newport main road, Donnington.

Norham.—R.D.C. approved plans for extensive alterations to Horncliffe House, for A. Cayley.

North Shields.—British Sailors' Society to erect hut for sailors, at £1,000. Architect, W. Stockdale, 73, Howard-st.

Oswaldtwistle.—D.C. approved : Storeroom, Vine Spinning Co., Ltd.; farm buildings, Waterside Farm, T. Procter.

Peterborough.—T.C. approved : S. Dodson and Son, factory additions, Baker, Perkins, Ltd.; S. Dodson and Son, bakery additions, Queen-dr. West, A. Fowler and Son.

Runcorn.—R.D.C. propose cottages for farm workers', 2 at Helsby, 2 at Kingsley, 4 at Manley, 2 at Sutton and Halton, 2 at Norton, 4 at Antrobus and Great Budworth, 2 at Daresbury and Preston Brook, and 2 at Whitley.

Shrewsbury.—Border Breweries (Wrexham), Ltd., Mount-st., Wrexham, proposes reconstruction of "Oakleigh," Bynner-st., for up-to-date hotel to be known as "Prince of Wales." Architect, V. W. Reece, S. to company.

Southgate.—Formal consent received by T.C. from M.H. to borrowing additional £450 in connection with extensions to town hall.—Plans passed : garage at Metal Box Factory, Chequers-way, N.13, Metal Box Co., Ltd.

Staffordshire.—C.C. recommended to complete new County Technical College at Stafford at £43,500.

Swinton.—Whitworth, Son and Nephew, The Brewery, Wath-on-Dearne, proposing to rebuild "Cresswell Arms" p.-h. on enlarged site at Bowbroom.

West Stanley.—U.D.C. propose to make extensions to fire station. J. R. Heslop, S.

Wisbech.—T.C. approved : Lynn-rd., rebuilding of factory, Wisbech Produce Canners, Ltd.

Woolwich.—B.C. approved : mess-room on site, between 44 and 52, Burrage-gr., Plumstead. Associated Motor Cycles, Ltd., Plumstead.

* See also List of Contracts Open.

**** In these lists every care is taken to ensure that information given is accurate and up to date, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced.**

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st FEBRUARY, 1940

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors]

	Crafts-men.	Lab-ourers.
Aberavon	1/8½	1/3½
Aberdare	1/8½	1/3½
Abergavenny	1/8½	1/3½
Abingdon	1/7	1/2½
Accrington	1/8½	1/3½
Aldeburgh	1/5	1/1
Aldershot	1/7	1/2½
Alfreton	1/8½	1/3½
Alnwick	1/8	1/3¼
Altrincham	1/8½	1/3½
Amble	1/8	1/3¼
Amersham	1/7	1/2½
Ammanford	1/8½	1/3¾
Andover	1/6½	1/2¼
Ardingley	1/6½	1/2¼
Arundel	1/6½	1/2½
Ascot	1/6½	1/2½
Ashby-de-la-Zouch	1/8½	1/3¾
Ashford (Kent)	1/6½	1/2¼
Ashford (Middlesex)	1/8½	1/3¾
Ashington	1/8	1/3¼
Ashtead	1/8½	1/3¾
Ashton-under-Lyne	1/8½	1/3¾
Aylesbury	1/6½	1/2¼
Aylsham	1/5½	1/1½
Bagshot	1/6½	1/2½
Banbury	1/6½	1/2¼
Barnsley	1/8½	1/3¾
Barnstaple	1/6½	1/2½
Barrow-in-Furness	1/8½	1/3¾
Barry	1/8½	1/3¾
Basingstoke	1/6½	1/2¼
Bath	1/8	1/3½
Batley	1/8½	1/3¾
Beaconsfield	1/7	1/2½
Beccles	1/5	1/1
Bedford	1/8	1/3½
Berkhamsted	1/6½	1/2½
Berwick	1/8	1/3½
Beverley	1/8½	1/3¾
Bexhill-on-Sea	1/7	1/2½
Bideford	1/6½	1/2½
Biggleswade	1/6½	1/2½
Billericay	1/6	1/1½
Birchington	1/6½	1/2½
Birkenhead	‡§1/10½	¶
Birmingham	1/8½	1/3½
Bishop Auckland	1/8½	1/3¾
Bishops Stortford	1/7½	1/3
Blackburn	1/8½	1/3½
Blackpool	1/8½	1/3¾
Blyth	1/8½	1/3¾
Bognor Regis	1/6½	1/2½
Bolton	1/8½	1/3¾
Bournemouth	1/7½	1/3
Bracknell	1/6½	1/2½
Bradford	1/8½	1/3¾
Bradford-on-Avon	1/5½	1/1½
Braintree	1/6½	1/2½
Brentwood	1/8	1/3½
Bridgwater	1/7	1/2½
Bridlington	1/8	1/3¼
Brighouse	1/8½	1/3¾
Brighton	1/7½	1/3
Bristol	1/8½	1/3¾
Broadstairs	1/6½	1/2½
Bromsgrove	1/8	1/3¼
Buckley	1/8½	1/3¾
Bungay	1/4½	1/0½
Burnham-on-Crouch	1/5	1/1
Burnley	1/8½	1/3¾
Burslem	1/8½	1/3¾
Burton-on-Trent	1/8½	1/3¾
Bury	1/8½	1/3¾
Bury St. Edmunds	1/6	1/1½
Buxton	1/8	1/3¼
Byfleet	1/7	1/2½
Cambridge	1/8½	1/3½
Canterbury	1/6½	1/2½
Cardiff	1/8½	1/3¾
Carlisle	1/8½	1/3¾
Carnforth	1/8½	1/3¾
Castleford	1/8½	1/3¾
Caterham	1/8½	1/3¾
Chard	1/5½	1/1½
Chatham	1/7½	1/3
Chelmsford	1/8	1/3¼
Cheltenham	1/7½	1/3
Chepstow	1/8	1/3¼
Chertsey	1/7½	1/3
Chester	1/8½	1/3¾
Chesterfield	1/8½	1/3¾
Chichester	1/6½	1/2½
Chorley	1/8½	1/3¾
Cirencester	1/6	1/1½
Clacton	1/6½	1/2½
Cleveleys	1/8½	1/3½
Clitheroe	1/8½	1/3¾
Cobham (Surrey)	1/7½	1/3
Colchester	1/8	1/3¼
Colwyn Bay	1/7½	1/3
Congleton	1/8	1/3½
Coventry	1/8½	1/3¾
Cranbrook	1/6½	1/2½
Cranleigh	1/6½	1/2½
Crawley	1/6½	1/2½
Crewe	1/8	1/3½
Cromer	1/5½	1/1½
Crowborough	1/6½	1/2½
Cuckfield	1/6½	1/2½
Darlington	1/8½	1/3¾
Darwen	1/8½	1/3¾
Daventry	1/7	1/2½
Deal	1/6½	1/2½
Denbigh	1/7½	1/3
Derby	1/8½	1/3¾
Devizes	1/5½	1/1½
Dewsbury	1/8½	1/3¾
Didcot	1/6½	1/2½
Diss	1/5	1/1
Doncaster	1/8½	1/3¾
Dorchester	1/6	1/1¾
Dorking	1/7	1/2½
Dover	1/6½	1/2½
Dovercourt	1/6½	1/2½
Driffield	1/7	1/2½
Droitwich	1/8	1/3¼
Dudley	1/8½	1/3¾
Dunstable	1/7	1/2½
Durham City	1/8½	1/3¾
Eastbourne	1/7½	1/3
E. Glam. (Mon. Val.)	1/8½	1/3¾
East Grinstead	1/6½	1/2½
Edenbridge	1/6½	1/2½
Ely	1/5½	1/1½
Epping	1/8½	1/3¾
Exeter	1/8	1/3½
Exmouth	1/7	1/2½
Fakenham	1/5½	1/1½
Falmouth	1/7	1/2½
Fareham	1/7½	1/3
Faversham	1/6½	1/2½
Felixstowe	1/7½	1/3
Filey	1/7	1/2½
Fleetwood	1/8½	1/3¾
Flint	1/8½	1/3¾
Folkestone	1/6½	1/2½
Frinton-on-Sea	1/6½	1/2½
Frome	1/5½	1/1½
Gainsborough	1/7½	1/3
Gateshead	1/8½	1/3¾
Gillingham (Kent)	1/7½	1/3
Glossop	1/8½	1/3¾
Gloucester	1/8	1/3½
Godalming	1/6½	1/2½
Goole	1/8½	1/3¾
Gosport	1/8	1/3½
Grantham	1/7½	1/3
Gravesend	1/8	1/3½
Great Yarmouth	1/6½	1/2½
Grimsby	1/8½	1/3¾
Guildford	1/6½	1/2½
Guilsborough	1/7	1/2½
Halifax	1/8½	1/3¾
Hanley	1/8½	1/3¾
Harpenden	1/7½	1/3
Harrogate	1/8½	1/3¾
Hartlepools	1/8½	1/3¾
Harwich	1/6½	1/2½
Haslemere	1/6½	1/2½
Hastings	1/6½	1/2½
Hatfield	1/8	1/3½
Haywards Heath	1/6½	1/2½
Hednesford	1/8	1/3½
Hemel Hempstead	1/7½	1/3
Henley-on-Thames	1/6½	1/2½
Hereford	1/6½	1/2½
Herne Bay	1/6½	1/2½
Hertford	1/8	1/3½
Heysham	1/8½	1/3¾
Hitchin	1/7½	1/3
Hoddesdon	1/8	1/3½
Holt (Norfolk)	1/5	1/1
Horley	1/6½	1/2½
Horsham	1/6½	1/2½
Horwich	1/8½	1/3¾
Huddersfield	1/8½	1/3¾
Hull	1/8½	1/3¾
Hunstanton	1/5½	1/1½
Huntingdon	1/6	1/1½
Ilfracombe	1/6½	1/2½
Ingatestone	1/7	1/2½
Ipswich	1/8	1/3½
Isle of Thanet	1/6½	1/2½
Isle of Wight	1/6	1/1½
Keighley	1/8½	1/3¾
Kenilworth	1/8½	1/3¾
Kettering	1/8½	1/3¾
Kidderminster	1/8	1/3½
King's Lynn	1/6½	1/2½
Kirkham	1/8	1/3½
Knowle	1/8½	1/3¾
Lancaster	1/8½	1/3¾
Leamington	1/8½	1/3¾
Leatherhead	1/7½	1/3
Leeds	1/8½	1/3¾
Leicester	1/8½	1/3¾
Leighton Buzzard	1/5½	1/1½
Letchworth	1/7½	1/3
Lewes	1/6½	1/2½
Lichfield	1/7½	1/3
Lincoln	1/8½	1/3¾
Littlehampton	1/6½	1/2½
Liverpool	‡§1/10½	¶
Llandudno	1/7½	1/3
Llanelly	1/8½	1/3¾
London—		
12m. radius	1/10*	1/4½
12-15 m. radius	1/9½*	1/4½
Long Eaton	1/8½	1/3¾
Longton	1/8½	1/3¾
Loughborough	1/8½	1/3¾
Louth	1/7	1/2½
Lowestoft	1/6½	1/2½
Luton	1/8	1/3½
Macclesfield	1/8	1/3½
Maidenhead	1/7½	1/3
Maidstone	1/7	1/2½
Malvern	1/7	1/2½
Manchester	1/8½	1/3¾
Manningtree	1/5½	1/1½
Mansfield	1/8½	1/3¾
March	1/5½	1/1½
Margate	1/6½	1/2½
Market Harborough	1/7½	1/3
Matlock	1/7	1/2½
Melton Constable	1/5	1/1
Melton Mowbray	1/7½	1/3
Merthyr	1/8½	1/3¾
Middlesbrough	1/8½	1/3¾
Middleton	1/8½	1/3¾
Middlewich	1/8	1/3½
Milford Haven	1/7	1/2½
Morecambe	1/8½	1/3¾
Morley	1/8½	1/3¾
Mundesley	1/5½	1/1½
Nantwich	1/8	1/3½
Nelson	1/8½	1/3¾
Newark-on-Trent	1/8	1/3½
Newbury	1/6½	1/2½
Newcastle-on-Tyne	1/8½	1/3¾
Newcastle-u.-Lyme	1/8½	1/3¾
New Forest	1/6½	1/2½
Newmarket	1/6½	1/2½
Newport, Mon.	1/8½	1/3¾
Newport Pagnell	1/6½	1/2½
Northampton	1/8½	1/3¾
Norwich	1/8½	1/3¾
Nottingham	1/8½	1/3¾
Nuneaton	1/8½	1/3¾
Oakham	1/7	1/2½
Oldham	1/8½	1/3¾
Ormskirk	1/8½	1/3¾
Oxford	1/8	1/3½
Oxted	1/7	1/2½
Paignton	1/8	1/3½
Peterborough	1/8	1/3½
Plymouth	1/8½	1/3¾
Pontefract	1/8½	1/3¾
Pontypridd	1/8½	1/3¾
Port Talbot	1/8½	1/3¾
Portsmouth	1/8	1/3½
Preston	1/8½	1/3¾
Pulborough	1/6½	1/2½
Ramsgate	1/6½	1/2½
Reading	1/8	1/3½
Redditch	1/8	1/3½
Redhill	1/7	1/2½
Ripon	1/7	1/2½
Rochdale	1/8½	1/3¾
Rochester	1/7½	1/3
Rugby	1/8½	1/3¾
Saffron Walden	1/5½	1/1½
St. Albans	1/8	1/3½
St. Helens	1/8½	1/3¾
St. Neots	1/6	1/1½
Salisbury City	1/6	1/1½
Salisbury Plain	1/7½	1/3
Sawbridgeworth	1/7	1/2½
Saxmundham	1/5	1/1
Scarborough	1/8	1/3½
Scunthorpe	1/8½	1/3¾
Selby	1/8½	1/3¾
Sevenoaks	1/7	1/2½
Sheerness	1/6½	1/2½
Sheffield	1/8½	1/3¾
Shipley	1/8½	1/3¾
Shoeburyness	1/8	1/3½
Shoreham	1/7½	1/3
Shrewsbury	1/8	1/3½
Sittingbourne	1/6½	1/2½
Skegness	1/7½	1/3
Sleaford	1/7	1/2½
Slough	1/7½	1/3
Southampton	1/8	1/3½
Southend-on-Sea	1/8	1/3½
Southport	1/8½	1/3¾
South Shields	1/8½	1/3¾
Spalding	1/6½	1/2½
Stafford	1/8	1/3½
Staines	1/7½	1/3
Stamford	1/7½	1/3
Stevenage	1/7½	1/3
Stockport	1/8½	1/3¾
Stockton-on-Tees	1/8½	1/3¾
Stoke-on-Trent	1/8½	1/3¾
Stourbridge	1/8½	1/3¾
Stourport	1/8	1/3½
Stowmarket	1/5½	1/1½
Stratford-on-Avon	1/7½	1/3
Stroud	1/7½	1/3
Sunderland	1/8½	1/3¾
Sutton Coldfield	1/8½	1/3¾
Swaffham	1/5	1/1
Swanage	1/6½	1/2½
Swansea	1/8½	1/3¾
Swindon	1/7	1/2½
Tamworth	1/8	1/3½
Taunton	1/7	1/2½
Tenterden	1/6½	1/2½
Thames Haven	1/8½	1/3¾
Thetford	1/6	1/1½
Thorpe Bay	1/8	1/3½
Todmorden	1/8½	1/3¾
Tonbridge	1/7	1/2½
Torquay	1/8	1/3½
Totnes	1/6½	1/2½
Trowbridge	1/5½	1/1½
Truro	1/6	1/1½
Tunbridge Wells	1/7	1/2½
Uppingham	1/7	1/2½
Uttoxeter	1/7	1/2½
Wakefield	1/8½	1/3¾
Walsall	1/8½	1/3¾
Walsden	1/8½	1/3¾
Walton-on-Naze	1/6½	1/2½
Ware	1/8	1/3½
Warminster	1/5½	1/1½
Warrington	1/8½	1/3¾
Warwick	1/8½	1/3¾
Wellingborough	1/8	1/3½
Welwyn	1/7½	1/3
Welwyn Gar. City	1/8½	1/3¾
Wells (Norfolk)	1/5	1/1
West Bromwich	1/8½	1/3¾
Westcliff-on-Sea	1/8	1/3½
Weston-super-Mare	1/7½	1/3
Weybridge	1/7½	1/3
Weymouth	1/6½	1/2½
Whitby	1/7½	1/3
Whitstable	1/6½	1/2½
Widnes	1/8½	1/3¾
Wigan	1/8½	1/3¾
Wigton	1/7	1/2½
Willington	1/8	1/3½
Wilmslow	1/8½	1/3¾
Winchester	1/7	1/2½
Windermere	1/7	1/2½
Windsor	1/7½	1/3
Wisbech	1/6	1/1½
Witham	1/6½	1/2½
Woking	1/7	1/2½
Wokingham	1/6½	1/2½
Wolverhampton	1/8½	1/3¾
Woodbridge	1/6	1/1½
Worcester	1/8	1/3½
Workington	1/7	1/2½
Worksop	1/8	1/3½
Worthing	1/6½	1/2½
Wrexham	1/8	1/3½
Wroxham	1/6	1/1½
Wycombe	1/7½	1/3
Wymondham	1/5½	1/1½
Yeovil	1/7	1/2½
York	1/8½	1/3¾

* Painters 1d. less than other Craftsmen. ‡Plasterers 1/11.
¶ Tradesman's Labourers 1/4½. Navvies and General Labourers 1/4½.
§ Joiners, Plumbers, Bricklayers, Tilers and Masons receive 2/- per week or 4d. per day Tool Money.

For Building Trade Wages in Scotland, see page 204.

PRICES CURRENT OF MATERIALS*

Note: Owing to the exceptional circumstances which prevail at the present time prices of materials should be confirmed by inquiry.
The softwood prices are the maxima established by the Timber Control Department.
At present linseed oil and genuine spirits of turpentine can only be supplied in cans in small quantities.
Lead can only be obtained for Government or A.R.P. work and urgent repairs.

BRICKS, &c.

Delivered to site, City and Central Area, Full Lorry Loads. £ s. d.
Best Stocks 4 15 0
Second Hard Stocks 4 8 0

Per 1,000. Delivered at London Goods Stations.

2½ in. Phorpres.	King's Cross Station. per 1,000.	To sites in W.C. District. per 1,000.
	s. d.	s. d.
Pressed bricks	46 3	50 6
Cellular bricks	46 3	50 6
Keyed bricks	48 3	52 6
Cellular Keyed bricks	48 3	52 6
Rustic bricks	*66 3	*70 6
Cellular Rustic bricks	*66 3	*70 6
Single Bullnose	64 3	68 6
White bricks	*66 3	*70 6
Sandfaced bricks	—	75 6

* Subject to a special discount of 2s. per 1,000 ft. accompanied by order for Pressed. £ s. d.
White Midhurst Facing Bricks (delivered London site) 3 12 6
Best blue Pressed Staffs 8 6 6
Do. Bullnose 8 16 6
Blue Wire Cuts 7 4 0
Best Stourbridge Fire Brick :—
2½ in. ..... 7 15 0 3 in. 8 15 0

GLAZED BRICKS—

Best White Ivory and Salt Glazed Stretcher	24 0 0	D'ble Str'tch'rs	32 10 0
		D'ble Headers	29 10 0
		One side & two ends	33 10 0
Headers	23 10 0	Two sides & one end	34 10 0
Quoins, Bullnose and 4½in. Flats	30 10 0	Splays and Squints	31 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

PARTITION SLABS.

Delivered London Area.

PHORPRES" HOLLOW PARTITION BLOCKS.

2" per yd. sup. ..	2 3	3" per yd. sup. ..	2 9
2½" " "	2 6	4" " "	3 1

CLINKER CONCRETE.

2" per yd. sup. ..	1 6	3" per yd. sup. ..	2 0
2½" " "	1 8	4" " "	2 4

CRANHAM TERRA COTTA.

2" per yd. sup. ..	3 0	3" per yd. sup. ..	3 8
2½" " "	3 6	4" " "	4 7

HEMPSTEAD—KEYED TWO SIDES.

12" x 9" x 2"	2 6	12" x 9" x 3"	3 0
12" x 9" x 2½"	2 9	12" x 9" x 4"	3 9

Per yard super d/d. Free on site, London.

SAND.

Thames Ballast	7	9	per yd.
Pit Ballast	7	3	" " delivered 2 miles radius Paddington.
Pit Sand	9	9	" "
Washed Sand	10	9	" "
¾in. Shingle	8	0	" "
¾in. Broken Brick	12	0	" "
Pan Breeze	8	3	" "

CEMENT.

Best British Portland Cement. Standard Specification delivered London Area in jute sacks (11 to ton), or paper bags (20 to ton) free (non-returnable) :— £ s. d.
4 ton loads and upwards site ..... Per ton 2 5 0
1 ton to 4 tons site 2 8 0
Alongside Vauxhall in 80-ton lots 2 2 6
" Ferrocrete " Rapid Hardening Cement :—
4 ton loads and upwards site 2 11 0
1 ton to 4 tons site 2 14 0
Alongside Vauxhall in 80-ton lots 2 8 6
Stores in Reserved Bins at Works 1/6 ton extra.
NOTE.—Jute sacks are charged 1s. 6d. each and credited 1s. 6d. nett, if returned in good condition within three months, carriage paid.
" Aquacrete" Water Repellent, " Blue Circle " Cement, 30/- per ton extra on ordinary "Blue Circle " Portland Cement prices.
" Colorcrete " Nos. 1 and 2 Coloured Rapid Hardening Portland Cement in 1-cwt. paper bags free (non-returnable) in 1-ton lots and upwards site 3 15 0
" Colorcrete," not rapid-hardening, in 1-cwt. paper bags free (non-returnable), according to colour, from £7 to £15 10s. per ton.
" Snowcrete " White Portland Cement in 1-cwt. paper bags free (non-returnable) 1 ton and upwards site 8 15 0
Super Cement (Waterproof) paper bags free 3 15 0
Roman Cement £6 15 Keene's Cement, White 5 10 0
Parian Cement £5 10 " " Pink 5 2 6
Cementone Colours for cement according to tints per cwt. from £2 16s. 0d.

PLASTER.

	£ s. d.		£ s. d.
Coarse, Pink	3 0 0	Sirapite, Coarse ..	3 10 0
" White ..	3 10 0	" Finish ..	3 18 0
Pioneer	3 10 6		
Super Carbo	2 7 6	4-ton loads and over London Area, paper bags free.	
Carbo Setting. ...	2 12 6		
Best Ground Blue Lias Lime	1 17 6	Grey Stone Lime	2 2 0
		Chalk Lime	2 2 0
Granite Chippings	1 5 0	Hair per cwt. ..	2 7 6

NOTE.—Sacks are charged 1s. 9d. each, and credited 1s. 6d., if returned in good condition within three months, carriage paid.
Stourbridge Fireclay in sacks 37s. per ton at rly. dep.

STONE.

BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube .... s. d. 2 10½
BEER STONE—RANDOM BLOCK—
Free on rail at Seaton Station. per ft. cube 2 3
Delivered free on rail Nine Elms, S.R. " 3 1½
Selected approximate size one way, 1d. per cubic ft. extra, selected approximately three sizes or for special work, 3d. per cubic ft. extra.

PORTLAND STONE— s. d.
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube. 4 5
Do. do. delivered on road waggons as above stations, per ft. cube. 4 6
White basebed, 3d. per ft. cube extra.
NOTE.—1d. per ft. cube extra for every ft. over 20 ft. *average* and ½d. beyond 30 ft.
HOPTON-WOOD STONE—
F.O.R. Quarries, Wirksworth, Derbyshire, Random blocks from 10 ft. and over P.ft.cb. 14 0
Sawn two sides. 22 6
HOPTON-WOOD STONE—
Sawn three or four sides. 27 9
YORK STONE, BLUE—*Robin Hood Quality.*
Delivered at any Goods Station, London.
6 in. sawn two sides landings to sizes (under 30 ft. super) ..... per ft. super 5 0
6 in. rubbed two sides, ditto .. " 5 6
3 in. sawn two sides slabs (random sizes) ..... " 2 3½
2 in. to 2½ in. sawn one side slabs (random sizes) (paving) ..... " 1 6½
1½ in. to 2 in., ditto. ..... " 1 3¼
HARD YORK—
Delivered at any Goods Station, London.
Scrappled random blocks. ..... per ft. cube 6 3
6 in. sawn two sides landings to sizes (under 40 ft. super) ..... per ft. super 5 1½
6 in. rubbed two sides, ditto .... " 6 1½
4 in. sawn two sides slabs (random sizes) ..... " 3 1½
3 in. ditto ditto ..... " 2 5
2 in. self-faced random flags ..... Per yd. super 7 6

CAST STONE.

Delivered in London are in full van loads, per ft. cube : Plain, 7s. 6d. Moulded, 8s. 6d. Sills, 10s. 0d.

HARD WOOD.

1 INCH AND UP THICK.

Average price for prime quality. £ s. d.
Dry Austrian Wainscot, per ft. cube. 0 17 0
Dry American and/or Japanese Figured Oak, per ft. cube. ..... 10 0 to 0 12 6
Dry American and/or Japanese plain Oak, per ft. cube 0 11 6
Dry sq. edged Honduras Mahogany, per ft. cube. 0 15 0
Dry log-cut Honduras Mahogany, per ft. cube. ..... 12 6 to 0 16 0
Dry Cuba Mahogany, per ft. cube. 0 18 0
Dry Teak, per ft. cube. 0 14 0
Dry American Whitewood, per ft. cube. 0 10 6
Dry Australian Walnut, per ft. cube 0 17 0
Dry Queensland Silky Oak, per ft. cube. ... 0 11 0
Dry African Mahogany, per ft. cube 0 10 0
Dry African Whitewood, per ft. cube. 0 8 0
Dry English Wainscot Oak, per ft. cube. 0 16 0
Best Scotch Glue, per cwt. 3 0 0
Liquid Glue, per cwt. ..... 4 7 0 to 5 10 0

SOFT WOOD.

GOOD BUILDING DEAL.

Inches.	Per stan.	Inches.	Per stan.
4 × 11.	£38 10	3 × 6.	£31 10
4 × 9.	38 10	3 × 11.	38 10
4 × 8.	35 10	2 × 11.	38 10
4 × 7.	35 10	3 × 9.	37 10
3 × 8.	32 10	2½ × 9.	37 10
3 × 7.	31 10	3 × 4½	30 0
2½ × 7.	31 10	3 × 4.	30 0

Having secured the Contract— What about the Steel Scaffolding?

TUBULAR

—S & C—

SCAFFOLDING

For the lowest Prices apply to the Oldest Firm in The Scaffolding Trade.

STEPHENS & CARTER LTD.

The British Steel Scaffolding Co.

731-761, HARROW RD., N.W.10.

Telephone No. Ladbroke 1191 (6 lines).

PLANED BOARDS.

1 × 11.	£43 10	1 × 9.	£39 10

PLAIN EDGE FLOORING.

Inches.	Per sq.	Inches.	Per sq.
¾	22/6	1¼	38/-
¾	25/-	1½	42/6
1	28/6		

TONGUED AND GROOVED FLOORING.		MATCHING (BEST)	
Inches.	Per sq.	Inches.	Per sq.
1	29/-	¾	23/-
1¼	38/6	¾	25/-
1½	43/-	1	29/-

lins. BATTENS.	s. d.	SAWN LATHS.	s. d.
¾ × 2 per 100 ft.	2 9	Per bundle	2 6

SLATES.

First quality slates from Penrhyn or Portmadoc. carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12 ..	31 5 0	18 by 10	16 10 0
22 by 12 ..	26 5 0	18 by 9	14 17 6
22 by 11 ..	23 12 6	16 by 10 ..	14 7 6
20 by 12 ..	23 2 0	16 by 8 ..	11 6 0
20 by 10 ..	20 15 0		

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons. ..... Per 1,000 f.o.r. London.

Best machine-made tiles from Broseley or Staffordshire district.	£4	2	6
Ditto hand-made ditto	4	17	6
Ornamental ditto	5	2	6
Hip and valley tiles (per dozen) Hand-made	0	8	6
Machine-made.	0	8	0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION PER TON—

R.S. Joists, cut and fitted	£16	0	0
Plain Compound Girders	19	0	0
" " Stanchions	21	0	0
In Roof Work	25	0	0

NOTE.—These prices are for standard pieces and not special pieces of an awkward nature.
MILD STEEL ROUNDS.—To London Stations, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
¼ in.	16 12 6	⅜ in. to ½ in. ..	15 2 6
⅜ in.	15 12 6	⅝ in. to 2½ in.	14 12 6

WROUGHT-IRON TUBES AND FITTINGS—
(Discount off List for lot of not less than £10 net value delivered direct from Works, 2½ per cent. less above gross discounts, carriage forward, if sent from London Stocks.)

	Standard Wrot. Mild Steel Tubes. and Tubulars. Sizes. ⅛in. to ⅜in.	Standard Wrot. Flanges. Sizes. ⅛in. to 2in.	Standard Wrot. Fittings. ⅛in. to 2in.
	%	%	%
Gas	60	65	62½ 58½
Water	57	62½	62½ 55
Steam	53½	58½	51½ 50
Gal. gas	50	55	51½ 48½
Galv. water	45	50	43½ 43½
Galv. steam	38½	43½	38½ 40

C.I. HALF-ROUND GUTTERS—London Prices ex Works.

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop. Ends
3 in.	1/2½	1/-	4d.
3½ in.	1/3½	1/1½	4d.
4 in.	1/3½	1/2½	5½d.
4½ in.	1/4½	1/4½	6½d.
5 in.	1/7½	1/6½	7½d.

O.G. GUTTERS.

3 in.	1/6½	1/4	4½d.
3½ in.	1/8½	1/4	5½d.
4 in.	1/8½	1/4½	6½d.
4½ in.	1/9½	1/7½	7½d.
5 in.	2/3	1/10½	8½d.

RAIN WATER PIPES, &c.

Per yd. in 6 fts.	Pipe.	Bends, stock angles.	Branches. stock angles.
2 in.	1/9½	1/2½	1/9½
2½ in.	1/10½	1/4½	2/2
3 in.	2/4	1/8½	2/7½
3½ in.	2/9½	2/1	3/0½
4 in.	3/2½	2/6	3/7½

NETT PRICES.
Tonnage allowance—4-ton lots, 5 per cent.
2-ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES—London Prices, ex Stock.

	Pipe.	Bends, stock angle.	Branches. stock angles.
	s. d.	s. d.	s. d.
2 in. per yd. in 6 fts. ..	3 0½	2 2	2 7½
2½ in. "	3 7½	2 5	3 3½
3 in. "	3 10½	2 7½	3 11
3½ in. "	3 11½	3 2½	4 6
4 in. "	4 3½	3 7½	5 2½

L.C.C. COATED DRAIN PIPES.—London Prices, ex Stock.

	Pipe.	Bends, stock angles.	Branches. stock angles
	s. d.	s. d.	s. d.
3 in. per yd. in 9 ft. lengths	4 8	5 6	8 9
cwt. qr. lbs.			
4 in. " 1 1 20	6 7	6 3	11 0
5 in. " 1 2 22	8 3	11 3	17 0
6 in. " 2 0 6	9 9	13 0	21 3

Gaskin for jointing 65/- per cwt.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information. Prices are subject to 2½ per cent. cash discount.

PRICES CURRENT OF MATERIALS—(contd.)

	Per ton. £ s. d.		London. £ s. d.
IRON—			
Common Bars	12 15 0	..	13 15 0
Staffordshire Crown Bars—			
Good merchant quality	14 10 0	to	16 0 0
Staffordshire Marked Bars	18 0 0	..	19 0 0
Mild Steel Bars	12 18 0	..	13 18 0
Steel Bars, Ferro-Concrete quality, basic price	14 8 0	..	15 8 0
Hoop iron, basic prices	14 8 0	..	15 8 0
" Galvanised	24 8 0	..	26 8 0
IRON—	Per ton in London. £ s. d.		£ s. d.
Soft Steel Sheets, Black—			
Ordinary sizes, to 20 g.	16 5 0	..	17 5 0
" " 24 g.	17 5 0	..	18 5 0
" " 26 g.	18 5 0	..	19 5 0
Sheets, Flat, Best Soft Steel, C. R. and C.A. quality—			
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	17 10 0	..	18 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.	19 10 0	..	20 10 0
No. 1 quality £4 per ton extra.			
Flat and Galvanised Corrugated Sheets—			
Ordinary sizes 6 ft. to 9 ft. to 20 g.	18 5 0	..	20 5 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	18 15 0	..	22 5 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	20 15 0	..	22 15 0
Sheets, Galvanised, Flat, Best quality—			
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	19 5 0	..	22 5 0
Best Soft Steel Sheets, 22 g. and 24 g.	20 5 0	..	21 15 0
Best Soft Steel Sheets, 26 g.	21 15 0	..	22 15 0
Cut Nails, 3 in. to 6 in.	19 0 0	..	21 0 0
(Under 3 in. usual trade extras.)			

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

COPPER.

		s. d.
Seamless Copper tubes (basis)	per lb.	1 1
Strong sheet	"	1 3
Thin	"	1 4
Copper nails	"	1 3
Copper wire	"	1 3

PLUMBERS' BRASS WORK.

Delivered in London.
Stamped by Met. Water Board.

CRUTCH HEAD SCREW DOWN BIB COCKS FOR IRON. EASY CLEAN.

½ in.	¾ in.
29/-	45/- per doz.

CHROMIUM PLATED TOILET SCREW DOWN BIB COCKS FOR IRON. EASY CLEAN.

½ in.	¾ in.
40/-	59/- per doz.

SCREW DOWN STOP COCKS FOR IRON.

¼ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
31/-	44/6	75/-	175/-	250/-	396/- per doz.

SCREW DOWN STOP COCKS WITH TWO UNIONS FOR LEAD.

¼ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
42/6	65/-	102/-	195/-	210/-	510/- per doz.

DOUBLE NUT BOILER SCREWS.

¼ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
7/6	9/-	14/-	24/-	37/6	54/- per doz.

HEAVY CROYDON BALL VALVES.

¼ in.	¾ in.	1 in.	1¼ in.	1½ in.
33/6	55/6	85/-	165/-	237/- per doz.

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
9/-	11/-	16/6	29/-	42/-	45/- per doz.

BRASS FERRULES OF SLEEVES.

1½ in.	2 in.	3 in.	3½ in.	4 in.
9/6	11/6	20/6	26/-	37/- per doz.

DRAWN LEAD TRAPS WITH BRASS CLEANING SCREWS.

	1¼ in.	1½ in.	2 in.	3 in.
8 lb. Lead P.	17/6	23/-	32/6	66/6 per doz.
8 lb. Lead S.	21/6	27/6	39/6	73/- per doz.

SOLDER.—Plumbers', 1/2, Tinmen's, 1/4, Blowpipe, 4/6 per lb.

PAINTS, &c.

		£ s. d.
Raw Linseed Oil, in drums	per gallon	0 4 3
Boiled " " in drums	"	0 4 6
Turpentine, in drums (10 gals.)	"	0 5 8
Genuine Ground English White Lead, per ton (In not less than 5-cwt. casks.)		60 0 0
Extra for 1-cwt. kegs over 5-cwt. casks is 2/9 cwt.		
GENUINE WHITE LEAD PAINT. "Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polacco," "J" Brand, and other best brands (in 14-lb. tins) not less than 5-cwt. lots	per ton delivered	£ s. d. 80 0 0
Red Lead, Dry (packages extra)	per ton	52 0 0
Best Linseed Oil Putty	per cwt.	0 15 0
Size. XD quality	fkn.	0 3 6

Turpentine substitute can be obtained and prices vary according to the quality from 2/9 gallon upwards.

VARNISHES, &c.

		Per gallon.
Oak Varnish	Outside	0 14 0
Fine do.	"	0 16 0
Fine Copal	"	0 18 0
Pale Copal	"	1 0 0
Pale Opal Carriage	"	1 4 0
Best do.	"	1 12 0
Floor Varnish	Inside	0 18 0
Fine Pale Paper	"	0 18 0
Fine Copal Cabinet	"	1 2 0
Fine Copal Flatting	"	1 0 0
Hard Drying Oak	"	0 18 0
Fine Hard Drying Oak	"	0 19 6

		Per gallon.
Fine Copal Varnish	Inside	1 0 6
Pale do.	"	1 12 0
Best do.	"	1 2 6
Best Japan Gold Size		1 12 6
Best Black Japan		0 10 0
Oak and Mahogany Stain (water)		0 12 0
Brunswick Black		0 7 6
Berlin Black		0 14 0
Knotting (patent)		0 15 0
French and Brush Polish		0 12 0
Liquid Dryers in Terebene		0 9 0
Cuirass Black Enamel		0 7 0

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

ORDINARY GLAZING QUALITY AND SELECTED GLAZING QUALITY.

	per ft. super.		per ft. super.
18 oz. O.Q.	2¼d.	32 oz. O.Q.	5½d.
18 " S.Q.	2⅝d.	32 " S.Q.	5⅞d.
24 " O.Q.	3⅛d.	Obscured Sheet, 18 oz.	3d.
24 " S.Q.	3⅜d.	" " 24 "	4⅛d.
26 " O.Q.	3⅝d.	Fluted 21 "	9d.
26 " S.Q.	4⅜d.	Em'lld 18 oz., 5½d., 24oz. 6⅜d.	

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE AND FIGURED CATHEDRAL, ETC., IN CUT SIZES.

	Per ft.
Rolled plate, ¼ in.	5⅛d.
Rough cast double rolled, 3/16 in.	6⅛d.
Rough cast double rolled, ¼ in.	6⅞d.
Figured rolled, and Cathedral, white	6⅜d.
Figured rolled and Cathedral, tinted	9⅜d.
Rolled Sheet	6d.
Reeded, Broad Reeded, Cross Reeded and Chevron Reeded, ¼ in. thick	0 10½

Rolled plate is the same price as rough cast double rolled.

	Per ft. s. d.
Wire Rolled, ¼ in. thick	0 9½
Wired Cast, ¼ in. thick	0 9½
Georgian Wired Cast	0 10
"Calorex" Sheet, 21 oz.	2 6
" " 32 oz.	4 0
" Cast, ¼ in. thick	0 10
" " 3/16 in. thick	1 0
" " ¼ in. thick	1 2
Non Actinic Glass, ¼ in. thick	0 9½
" " " 3/16 in. thick	1 0
" " " ¼ in. thick	1 2

"VITA" GLASS.

	s. d.
Clearsheet—not exceeding 1 foot	1 3
" " 2 feet	1 6
" over 2 feet	2 0
Polished plate not exceeding 1 foot	1 6
" " 2 feet	3 0
Cathedral—not exceeding 1 foot	1 3
" exceeding 1 foot	1 9
3/16" in. Wired Georgian Design. Sizes up to 96 inches long by up to 24 inches wide	3 0

LEAD, &c.

(Delivered in London.)	Per ton. £ s. d.
LEAD.—Sheet, English, 4 lb. and up	34 10 0
Pipe in coils	35 0 0
Soil pipe	39 10 0
Compo pipe	41 5 0

NOTE.—Country delivery, 20/- per ton extra, lots under 3 cwt. 4/- per cwt. extra and over 3 cwt. and under 5 cwt., 2/6 per cwt. extra. Cut to sizes, 4/- per cwt. extra.

Old lead, ex London area, at Mills. per ton £21 10 0

BUILDING TRADE WAGES IN SCOTLAND

Following are grade rates authorised by the Scottish N.J.C. from February 1. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classification	A	A¹	A²	A³	B	B¹
Craftsmen	1/9	1/8½	1/8	1/7½	1/7	1/6½
Labourers	1/4	1/3¾	1/3¼	1/3	1/2¼	1/2¼

Aberdeen	A	Dumfriesshire	A²	Inverness	*	Perthshire	A²
Ayrshire	A	Dundee	A	Inverurie	A¹	Peterhead	A¹
Banff	B	Dunoon	A	Kincardineshire	A²	Renfrewshire	A
Berwickshire	A²	East Fife	A	Kinross-shire	A	Rothesay	A
Bridge of Allan	A	East Lothian	A	Lanarkshire	A	Roxburghshire	A²
Broughty Ferry	A	Edinburgh	A	Midlothian	A	St. Andrews	A
Clackmannanshire	A	Fifeshire	A	Monifieth	A	Selkirkshire	A²
Doune	A	Forfarshire	A²	Moray and Nairn	B	Stewartry	A²
Dunblane	A	Glasgow	A	Newport	A	Stirlingshire	A
Dumbartonshire	A	Greenock	A	Peeblesshire	A²	Stornoway	A²
Dumfries	A¹	Hamilton	A	Perth	A	Tayport	A
						West Lothian	A

*This town has its own rates: Masons, 1/7; Carpenters, 1/7; Slaters, 1/7; Plumbers, 1/7½; Plasterers, 1/8, but 1/9 is paid owing to the scarcity at present; Painters, 1/7 and Labourers, 1/2½.

The information given in this table is copyright. Rates of wages in England and Wales are given on page 202.

THE SCOTTISH BUILDER

NEW BUILDINGS

ARGYLLSHIRE.—DISTILLERY.—Plans are to be prepared for Messrs. Black Bros., 138, Renfield-street, Glasgow, for the reconstruction at Campbeltown, with additions, to the Glengoyle Distillery.

DUNDEE.—BUILDINGS.—Plans submitted to City Engineer: Bellfield-street, extension to factory, for Urquhart Lindsay and Robertson Orchar, Ltd.; Commercial-street, alterations to bank, for the Commercial Bank of Scotland, Ltd.; Lytton-street, addition to bakery, for Andrew G. Kidd, Ltd. (architect, T. L. Gray, 7, Ward-road); Rockwell-place, garage, for the Boase Spinning Co., Ltd. (architects, Mills and Shepherd, 9, South Tay-street).

DUNFERMLINE.—OFFICES.—The Dean of Guild Court has granted permission to the Trustees of the Dunfermline and West Fife Hospital to erect office premises.

EDINBURGH.—BUILDING.—The Dean of Guild Court has granted the following warrants: Redpath, Brown and Co., Ltd.—workshop at St. Andrew's Steelworks, Albion-road; James Millar and Partners, Ltd.—to extend shop premises at 345, Calder-road; Young Bros.—to extend their Oakfield bakery, Pleasance.

GLASGOW.—BRIDGE.—Mr. T. Somers, Engineer to the Corporation, has prepared plans for a new bridge at Gower-street, which is to be erected at a cost of £9,408.

GLASGOW.—FACTORY.—From plans by their own architects the Dalsholm Paper Co., Ltd., Maryhill, is to carry out additions to the factory at Dalsholm-street.

GLENGOWAN.—HALL.—Plans in hand for new drill hall and additions and reconstruction of Glengowan public school at £2,100, for which the architect is Mr. John Stewart, Albert-street, Motherwell-Wishaw.

GOOSECROFT (Stirlingshire).—GARAGE.—Mr. A. Scroggin, architect, Brown-street Garage, Camelon, Falkirk, has prepared plans for a new motor-bus garage, workshop and offices.

IRVINE.—COLLEGE.—Ayr C.C. agreed to spend £30,861 on the erection of a new building to replace St. Michael's College, which was destroyed by fire.

PAISLEY.—GARAGE.—Plans approved for a Glasgow Corporation garage, workshops, etc., at Brownside Quarry, near Barrhead. The architect is Mr. W. MacNab, Housing Director's Office, 20, Trongate, Glasgow Cross.

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THE WASHING AND SHOWER ROOM AT KIDMORE END CAMP, NEAR READING. (See "Thermostatic Valves.")

TRADE NEWS

Air Volume Spraying Machines.

Messrs. Volspray, Ltd., of Grosvenor Gardens House, Grosvenor-gardens, London, S.W.1, have purchased the assets—including stock, goodwill, patents, and registered designs—of Messrs. Kurt Erlach, Ltd. (in compulsory liquidation), and will manufacture paint-spraying equipment of all types, and particularly the "Volspray" Air Volume type of spraying machines, at the new works at Tidal Basin-road, London, E.16. Prompt delivery can be given of all the standard types. The original staff of Messrs. Kurt Erlach, Ltd., have been taken over into employment.

Thermostatic Valves.

The equipment supplied to evacuation camps is of great interest just now, in view of the remote position of many of them and the consequent need for reliability. An important department is the washing and shower rooms, and we learn that "Leonard" thermostatic water-mixing valves have been recommended by the consulting architects for installation in all the evacuation camps under the authority of the National Camps Corporation.

These water-mixing valves fulfil two important functions—they save water and they give a safe shower. They mix hot and cold water at unequal or varying pressures, and it is important to note that the temperature of the blended water supplied from the valve is accurate in spite of fluctuations in the supplies. There is no risk of scalding and no waste of water. Normally eight valves are specified to each camp and the safety factor and the economy of water are the most important considerations. The manufacturers are Messrs. Walker, Crosweller and Co., Ltd., Whaddon Works, Cheltenham, whose valves have also been widely used for A.R.P. cleansing showers.

NEW COMPANIES

THE particulars quoted below have been compiled by Messrs. Jordan and Sons, Ltd., Company Registration Agents, of 116 and 117, Chancery-lane, W.C.2, from the documents available at the Companies Registry.

ARCHIE LIGHT, LTD. (358893).—Registered January 19. 603, Cowbridge-road, Victoria Park, Cardiff. Public works contractors, etc. Nominal capital: £1.000.

FRANK G. WHITE (BRIGHTON), LTD. (358852).—Registered January 17. 25, Mount-street, Brighton. Builders, contractors, etc. Nominal capital: £5,000.

J. W. FLATHER, LTD. (358904).—Registered January 19. Public works contractor. Ellesmere Port, Ches. Nominal capital: £15,000.

TENDERS

The Editor welcomes authentic information for this feature from architects, surveyors or contractors. Items should reach 4, Catherine-street, Aldwych, W.C.2, not later than Wednesday morning.

Tenders for A.R.P. work will be found under 'A.R.P. Schemes."

* Denotes *accepted.*
† Denotes *provisionally accepted.*
‡ Denotes *recommended for acceptance.*
§ Denotes *accepted subject to modification.*
¶ Denotes *accepted by H.M. Government departments.*

Ayr.—Pithead baths, for Miners' Welfare Council, Romney House, Marsham-st., Westminster, London :—Excavation, brick, mason —*D. I. Milligan, Ayr.

Barnstaple.—Small repairs to Council houses at Swimbridge, for R.D.C. S. P. Smith, housing manager :—Mr. Sturgess, Swimbridge, N. Devon.

Belfast.—Reconstruction of Belfast Water Commissioners' new offices :—Piling contract —*Prestcore Piling, Ltd.

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Belfast. — Sub-station, Brownlow-st., for Corporation :—*Sutherland, Montgomery and Co., Ltd., Belfast, £1,215 11s. 8d.

Birmingham.—Works for E.C. : Sundridge-rd. school—transfer and re-erection of huts, *Parsons and Morrin, Ltd., £1,997; heating installation, *J. Jackson and Co., £230. (Both of Birmingham.)

Corby.—Adaptation of old clothing factory premises above the Jamb for use as emergency mortuary accommodation, for T.C. :—*A. Tailby and Son, 29, Station-rd., Desborough, near Kettering, £134.

Dundee.—Various works at Carolina Port generating station. D. H. Bishop, general manager and engineer, Electricity Department, Dudhope Crescent-rd. Electric lighting and heating installation :—*Sherrock and Murray, Ltd., Dundee, £2,057 17s. 4d.; steelwork supporting master ceiling in new control room :—*Jas. Archer, Dundee, £120 10s.; steel casements :—*Crittall Manufacturing Co., Glasgow, £70 19s. 4d.; tilework :—*R. J. Robertson and Co., Dundee, £272 12s. 1d.; plasterwork :—*Wm. Brand and Son, Dundee, £260 2s. 3d.; plumbing work :—*Jas. Robertson and Son, Dundee, £688.

East Ham.—Works for C.B. : Wood-block flooring, Harts Sanatorium, *Acme Flooring and Paving Co., Ltd.; fencing, allotment sites, *D. Pallant.

Edinburgh. — National library at the George IV Bridge. J. Wilson Paterson, H.M. Architect for Scotland, 122, George-st. :—Excavation, brick and building—*Shaw and Campbell, Ltd., Glasgow.

Galston.—Church and complete offices. Maxwell, Stewart and Maxwell, architects and quantity surveyors, 57, Oswald-st., Glasgow :—Excavation, brick and mason work, etc.—*Stellnaes, Ltd., Glasgow.

Glasgow.—Various works for Corporation. T. Somers, architect, Office of Public Works. Chestnut fencing at Deanston-dr. :—*Alliance Fencing Co., Ltd., Wortham, Kent, £157 17s. 10d.; sectional coal chamber at Stobhill Hospital :—*A. and S. Hall, Ltd., Glasgow, £220; asphalt floors at Southern General Hospital :—*Limmer and Trinidad Lake Asphalting Co., Ltd., Glasgow, £200 8s. 2d.

Glasgow.—Hospital at Cowglen, for Corporation. J. Miller and Son, architects, 15, Blythswood-sq., West George-st., Blythswood. Plaster, lathing, etc. :—*D. Livingston and Sons, Ltd., Glasgow.

Glasgow.—New buildings at Durward-av., Dinmont-rd., Shawlands, for Toffolo, Jackson and Co., Ltd., 110, West Regent-st., Blythswood. W. Ross, architect, 187, Pett-st., Blythswood :—*Direct labour.

Hampstead.—Reinforced concrete suspended roof, floors, landings and lintels at the proposed new stores and A.R.P. shelter at Works Depot, Lymington-rd., for B.C. :—‡F. Troy and Co., Ltd., 194 and 196, Finchley-rd., N.W.3, £1,178.

Keighley.—22 houses for single persons on site of King-st. area, for T.C. :—*E. Turner, Ltd., £6,144.

Leyton.—Removal of tram tracks and other ancillary works in Lea Bridge-rd and Whipps Cross-rd., for T.C. :—*Direct labour.

Liverpool.—Works for City Council. Steelwork, by Lamella Roof Construction covered with Robertson's Protective Metal and reinforced patent glazing, for the proposed new motor 'bus garage and car shed, Stonebridge-la. :—‡Horsley Bridge and Thomas Piggott, Ltd., Tipton, £68,413; re-wiring and additional electrical installation at premises, 30a, Canning-pl. :—‡McBride and Nuttall, Ltd., 7, Sheil-rd., Fairfield, Liverpool, £115 10s.; rebuilding of rear wing of premises, 53, Upper Hope-pl. :—‡N. Broude, 76, Chatham-st., £193 7s. 6d.; 600 yds. of iron troughing for purpose of transporting pit props at Lake Vyrnwy :—‡R. McIvor and Sons, Ltd., 311, Cleveland-st., Birkenhead, £520.

Liverpool.—Factory at Fazackerley. Wallis, Gilbert and Partners, architects, 15, Elizabeth-st., London, S.W.1 :—*Wm. Thornton and Sons, Ltd., 38, Wellington-rd., Liverpool.

¶London (Air Ministry).—Contracts placed for week ended February 3 :—

Artificer's works, W. J. B. Halls, Ltd., Gloucester, and J. Brown and Son, Ltd., Newmilns, Ayrshire.

Air filtration and hot water supply, Norris Warming Co., Ltd., London, and Brightside Foundry and Engineering Co., Ltd., Birmingham.

District heating, G. N. Haden and Sons, Ltd., London, and Fretwell Heating Co., Ltd., London.

Hot water supply, G. N. Haden and Sons, Ltd., London.

Overhead cables and internal wiring, Building and Colliery Supply Co., Ltd., Doncaster.

Preparation of landing ground, Landing Grounds Corporation, Ltd., Isleworth.

Hutting, John Laing and Son, Ltd., London; Boulton and Paul, Ltd., Norwich, and Associated Rural Structures, Ltd., Amersham.

Taxi tracks, Geo. Wimpey and Co., Ltd., London.

¶**London (War Department).**—Contracts placed for week ended January 30 :—

Hants : Building work, Patching and Co., 7, Warwick-st., Worthing.

Isle of Wight : Building work, J. E. Cooper, 99, Victoria-av., Shanklin.

Kent : Hutting, Kent and Sussex (Contractors), Ltd., Carlton-rd., Erith; and building and electrical work, H. J. Cash and Co., Ltd., 94, High-st., Epsom.

Hampshire : Constructional work, Henry Osman and Co., Ltd., County wks., Winchester-rd., Southampton.

Cumberland : Constructional work, Brown, Fraser and Co., Ltd., 24, Durward-av., Shawlands, Glasgow.

Cheshire : Hutting, T. Warrington and Sons, Ltd., Station-rd., Ellesmere Port.

Glamorgan : Constructional work, Stone and Co. (Bristol), Ltd., Redland-rd., Bristol.

London : Building work, John Mowlem and Co., Ltd., Ebury Bridge-rd., London, S.W.1.

Argyllshire : Building work, John McDonald (Contractors), Ltd., East Kibride-rd., Rutherglen, Glasgow.

Inverness-shire : Building work, Donald C. Stewart, Bridge of Don, Aberdeen.

Leicestershire : Hutting, E. Clarke and Sons, Ltd., Snow Hill, Melton Mowbray.

Mablethorpe and Sutton.—Reconstruction of Wellington-rd., Mablethorpe, for U.D.C. A. E. Baker, E. and S. :—

	£	s.	d.
F. G. Smith and Co., Melton Mowbray	2,072	15	8
South Benfleet Builders' Supply Co., Leigh-on-Sea	2,053	6	8
The Winton Construction Co., Ltd., Louth	1,923	12	3
*W. G. C. Hammond, 98, High-st., Mablethorpe ...	1,832	11	1

Malden.—General building work for new highways depot, California-rd., for T.C. : *E. S. Moss, Ltd.

Morpeth.—Shop and café, Bridge-st., for W. S. Sanderson. C. F. Murphy, architect, Newgate-st. :—*R. Carse and Son, Ltd., Oldgate, Morpeth.

Salford.—Demolition and clearing of sites of 33 houses in Bury-st. and Johns-st. clearance areas, for T.C. :—‡T. Maiden and Son, Ltd., Manchester, £124.

Sevenoaks.—Central heating at the council's A.R.P. depot at Sundridge, for R.D.C. J. Randerson, M.Inst.M. & Cy.E., E. and S. :—*R. Durtnell and Sons, Brasted, £207.

Spilsby.—Construction of "Bolt" concrete water tower for improved water supply for R.D.C. L. W. Williams, Acting Water E. W. V. Zinn, Consulting E. :—*J. L. Kier and Co., Ltd., 142, Victoria-st., London, S.W.1.

Walton-le-Dale.—Alterations at School-la. for adapting building to mortuary, for U.D.C. :—*T. Billington, James-st., Bamber Bridge, £185.

Wareham.—Painting outside of 58 houses in Edwards-cres., and Nundico, for T.C. P. A. Byrne, L.R.I.B.A., A.I.A.A., B.S. Quantities by B.S. :—

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A. Marsh, Wareham	257	12
W. A. Fussell, Bournemouth ...	245	0
T. Moss and Son, Wareham ...	233	0
J. and R. Rigler, Ltd., Hamworthy	228	10
Stuart Macey, London	205	0
F. A. Walton, Swanage	190	0
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